THE CITY IN TIME AND SPACE: POLITICAL POWER, ECONOMIC
DEVELOPMENT, AND URBAN TRANSFORMATIONS, 1400-2010

by

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Abstract

This dissertation analyzes the world’s largest cities from 1400 to 2010, using a database of historical estimates of urban population that was compiled and developed by the author. Using this database, I identify a recurrent reorganization of global urban space moving between a hierarchical and heterarchical distribution of cities. Moreover, I show how this pendulum swing between hierarchy and heterarchy is highly correlated with recurrent crises of capital accumulation and associated shifts in the geographical center of power in the capitalist world economy. Finally, through a comparative-historical analysis of key cities over the past six centuries, this study develops a causal analysis of the relationship between systemic cycles of accumulation, urban (re)development, and crises of capital.

By placing cities into a macro-historical perspective, this study shows how contemporary urban crises are embedded in the dynamics of capital accumulation over the longue durée. The comparative-historical analysis presented in this study helps demonstrate why much of the current literature on urbanization is unable to reconcile the role and history of ‘primate’ cities in the world economy of the twentieth century and the emergence of new urban spaces in the twenty-first century. By challenging the narrative of national urban development in the twentieth century, it becomes clear that the ongoing urban transformation of the twenty-first century is not unprecedented (as it is commonly argued in the literature on urbanization), but is part of a recurrent cyclical reorganization and secular expansion of capital accumulation. Finally, the longue durée analysis presented here leads us to expect a transition away from the national cities of the twentieth century and towards an urban form that in many ways shares a closer commonality, politically, to
the city states of fifteenth century Italy and, demographically, to the imperial cities of the
nineteenth century.

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INTRODUCTION:

In 1977 Manuel Castells wrote The Urban Question, a treatise discussing the changing nature of urbanization throughout the world. For Castells, the non-industrial urban growth could not be equated with the same urban developments which had driven European and American urban development. Instead, the new urban development of the world was a form of “dependent urbanisation”, due to new social processes which were emerging.

This was because during much of the period, increasing urbanization throughout the world was highly correlated with industrialization. The growth of cities, such as New York, paralleled the industrial development of the United States. Urban development, as a manifestation of American hegemony, was easily identifiable and explainable in this context. New York was the largest and most powerful city in the world just as the United States was clearly the leading political and economic force upon which the world moved.

However, in the later part of the century this basic property failed with urban development running rampant in the South with little or no corresponding industrial development to match. Cities such as Mexico City, Rio de Janeiro, and others emerged as massive squalid slums, seemingly incapable of using their newly acquired labor force in classic production and consumption practices.

Although the global context of this event is acknowledged and identified….“urbanization-without-growth is more obviously the legacy of a global political conjuncture – the debt crisis of the 1970s and subsequent IMF-led restructuring of Third World economies in the 1980s – than an iron law of advancing technology”
It is also dismissed as an explanation; “‘Modernization’, ‘Development’ and, now, the unfettered ‘Market’ have had their day. The labour-power of a billion people has been expelled from the world system, and who can imagine any plausible scenario, under neo-liberal auspices, that would reintegrate them as productive workers or mass consumers?” (Davis; 2004, 27).

Urbanization is more than just the outcome of changing global forces acting on individual cities and populations, it a process that varies through time and space but one that always shares a central tenet, dependence. Cities are not urban spaces that exist in isolation with one another but instead are instead dependent upon their relationships to grow and survive. As Brian Berry has said, “Cities are systems within systems of cities” (Berry, 1964; pp.147).

However, any system of cities is not a stable system of perpetual organization but rather an urban system of perpetual reorganization where dominant cities within the system rise and fall.

“They dominate cities did not dominate forever; they replaced each other. This was as true at the summit as it was at every level of the urban hierarchy. Such shifts, wherever they occurred (at the top or halfway down), whatever their causes (economic or otherwise) are always significant; they interrupt the calm flow of history and open up perspectives that are the more precious for being so rare. When Amsterdam replaced Antwerp, when London took over...
from Amsterdam, or when in about 1929, New York overtook London, it always meant a massive historical shift of forces, revealing the precariousness of the previous equilibrium and the strengths of the one which was replacing it” (ibid; 32).

Therefore, this dissertation begins from the premise that individual cities are part and parcel of an urban system and the demographic changes of the world today are interminably intertwined with the changing nature of the world capitalist economy. Further, urbanization and the study of the city itself as a nominal essence is abandoned as a false choice. Building on the outline of Marx, in “The Method of Political Economy” (1973) the interrelation between capital and the urban form is used to develop a perspective where to understand the changing conditions of the urban form and the city, we must begin with an understanding of the current crisis of capital accumulation and its relationship to previous periods of crisis and reorganization over the previous six centuries.

This premise stands in stark contrast to much of the urban literature today which views demographic growth in urbanization as divorced from the economics and world historical forces of capital. Instead, demographic expansion of cities, especially those in the Global South, is seen as a dislocation where massive rural migrants are flooding the urban centers of their nations leaving unending squalid slums divorced from the economic opportunities which existed in the twentieth century.
These analyses see the urban development and the progressing ‘slums’ of the world as challenges to be met by adequate planning and resources by the nations which embody them where the decline of the state is the most important factor in explaining the uncontrolled urban development throughout the world. “The most important factor that limits progress in improving housing and living conditions of low-income groups in informal settlements and slums is the lack of genuine political will to address the issue in a fundamentally structured, sustainable, and large-scale manner” (The Challenge of Slums; 2003, 3).

This view immediately shifts the assumption that urban development in the latter half of the twentieth century and into the twenty-first century is a failure of policy and the state rather than a shifting mechanism of historical capitalism. The resolution of this conjuncture of events simply requires better political and social decisions to correct the mismanagement. The mega-cities and their associated slums in the third world are correctable problems which can be addressed by the nations in whom they are embedded.

To challenge the presentism of contemporary scholarship on urban crisis is not a simple foray into the question of the urban today but instead requires us to consider previous periods of urban crisis and reorganization in the world economy over long periods of history. There is currently an urban crisis, one which has now been ongoing for more than 30 years. However, a crisis of the urban is not a unique moment in history but a reoccurring dynamic of capital accumulation in the built environment over the longue durée – a repeating and evolving pattern of organization in the world system. Therefore we must extend our temporal scope to consider the presence of reoccurring urban
formations from which to clarify the possibilities and limitations for the future of urbanization in the twenty-first century.

To comprehend the current urban crisis we must understand the role of the dialectic in capital and its association with urbanization. To accomplish this, I begin with a conceptualization of capital as a series of systemic cycles over time and the associated regimes of accumulation which dominate these respective periods, where the reorganization of capital is also the reorganization of urban space and the systems of cities through which the process is manifested. In this way the structural conditions of capital and the continuous transformation of urban space is part of a cyclical process of accumulation where urbanization is not divorced from an economic logic of capital or the political influence of states. Rather, it is part and parcel of the understanding the entire dynamic of global capital and the interdependency of different regimes of accumulation and urban dynamics.

Specifically, cities and systems of cities play a central role in the ongoing global reorganization of capital accumulation over time and space and by examining the changing historical patterns of urbanization and the role of specific cities, we can begin to understand the conditions of change underpinning the current urban transformations being witnessed today.

To establish this connection, the study examines urban development patterns from the fifteenth through the close of the twentieth century’s to illuminate the changing patterns of urban distributions. Examining the distribution of urban space stands as a proxy for the distribution of power in the world economy of capital. Changes in these distributions
indicate the changing political and economic structural conditions of regimes of accumulation and the historical contingency from which to place the creation and destruction of urban forms and their associated political, economic and social processes into a comparative-historical context.

Once the patterns of (re)organization and development have been established, I pull out key anomalies and cases in these historical systems of cities to engage in a deeper, case-study, of the particular manifestation of capital within the city itself and the sub-systems of cities which operate at national or imperial levels of political organization and control. It is through this process that the city as system and the systems of cities can be fully contextualized within the patterning of urbanization and development through time.

Drawing from Arrighi (1994) I theorize that successive hegemonic orders produce successive distributions of urban systems where the urban distribution itself is an intertwined part of the economic and ideological processes of the hegemon. Therefore, the expanding urban development of the latter part of the 20th century through the present does not represent the dislocation of urban development from political and economic conditions of the world but rather the reorganization of urban development’s as a new hegemonic order emerges in the 21st century. The ‘slum cities’ of the third world and the ‘world cities’ of the first world are not disparate elements of competing interests but unified elements of the integrated global process of historical capitalism.

In Part I of the dissertation I will establish the theoretical model for alternative urban formations in the world economy and demonstrate a striking correlation between the temporal and organizational forms of capital accumulation and urban development.
Chapter 2 will outline the theoretical pattern of synchronicity while Chapter 3 will demonstrate the empirical patterns of urbanization from 1400 to 2010 and the correlation between urbanization and hegemonic rise and fall.

Part II, Chapters 4 through 7, of the dissertation will explore the particular dynamics of urban development and reorganization to clearly establish a causal mechanism between the organization of cities and the structure and strategy of capital accumulation. By moving between the global conditions of capital reorganization at the global level and strategies of urbanization at the local level, I endeavor to provide both case-studies of particular urban formations within the built environment of particular cities and a broad analysis of the overall changing form of urbanization at particular periods in history.

To paraphrase and plagiarize from a favorite academic endeavor of mine: This argument, unlike a shiny new Dodge, is not immediately compelling. It’s complicated, it grows on you – or at least it grew on me. If you are a practicing Urbanist with hypertension problems, stop. Read something safe like Joel Kotkin’s *The City: A Global History*. If you are healthy but new to the field, I highly recommend Mike Davis’ *Planet of Slums*. Fill up, because we are diving into the deep end and not coming up for air.¹

¹ Taken from the introduction of Stephen Lekson’s (1999) *The Chaco Meridian: Centers of Political Power in the Ancient Southwest*, whose irreverent style always makes for an entertaining adventure.
PART I: PATTERNS OF URBANIZATION

Chapter 1: ARTICULATING A SOCIAL SPATIAL RELATIONSHIP

In 1925, Henri Pirenne, in attempting to explain urban development after the fall of Rome wrote, “The continued commercial activity after the disappearance of the Empire, and, likewise, the survival of the towns that were the centers thereof and the merchants who were its instruments, is explained by the continuation of Mediterranean trade… [which] did not cease, despite the political subdivisions which it had seen take place, to consolidate the economic unity which it had shaped for centuries under the imperial commonwealth. Because of this fact, the economic organization of the world lived on after the political transformation (Pirenne, 1925; 15-16, emphasis added).”

Pirenne’s insights into the urban development of post-Roman Europe were further developed by Paul Roberts (1976) who argued that ‘great cities’ and particularly Rome could only be provisioned by enlarging the political and economic dimensions of the associated territory. Therefore, the Roman Empire was a city-building process where hundreds of new cities were established by “purposeful design” to ensure the subordination to Rome and the provisioning of the imperial city.

“The Roman Empire was a product of a single expanding power center striving (among other things, of course) to extend and protect its claim on resources. It was a vast city-building enterprise which left the imprint of Rome on every part of Europe, North Africa, and Asia Minor, altering the way of life in the old cities and establishing by purposeful
design hundreds of new cities, always following a deliberate policy of dispersal, in subordination to Rome…” (Roberts, 1976; pp.160-163, emphasis added).

In this way, Robert’s argues that Pirenne’s thesis was true but for the wrong reasons. Pirenne focused on the levels of trade rather than the qualitative differences in the organization and orientation of the world economy of the Mediterranean. “It was not the amount of trade, but the type of trade; not the quality of the markets, but the method of organization of markets; not the existence of trade, but the orientation of trade” (ibid).

Pirenne’s thesis and Robert’s elaboration becomes an essential element to understanding the changing conditions of global economic and social change. In “Stages in the Social History of Capitalism” (1953), Pirenne observes a regularity to the phases of “economic regulation” and “economic freedom”. This regularity operated as a “pendulum” between the relatively free conditions of mobile commerce to the regulatory conditions of the urban economy. “Just as the regulative spirit of the urban economy followed on the freedom of the twelfth century, so mercantilism imposed itself upon commerce and industry in the seventeenth and eighteenth centuries” (Pirenne, 1953; pp. 515).

Giovanni Arrighi expanded upon Pirenne’s pendulum swing, applying it to the historical context of the “double movement” which occurs from one hegemonic regime to the next. As new hegemonic orders rise there is both an increase in size, complexity and power but also a revitalization of the previous regimes governmental and business strategies
(Arrighi 1994; 218). This involves both a reorganization of the global political-economy and a reorganization of the global urban hierarchy. Thus Pirenne’s pendulum is not simply a process of moving between differing periods of historical economic development but differing periods of historical capitalist development which, in turn, are both reorganizations and reincorporation’s of previous historical conditions.

Following Arrighi (1994), there have been two hegemonic cycles based upon different modes of accumulation which move back and forth in world historic context in a “pendulum-like movement”. These two hegemonic regime types, a corporate-national organizational system which has been followed by the US and Dutch regimes and a cosmopolitan-imperial organizational system which has been followed by the Genoese and British regimes. The corporate-national regimes are “intensive”, meaning that the geographic expansion of the previous regime is consolidated onto the power of the current regime, while the “extensive” regimes, meaning that they geographically expand the basis of their domination to incorporate other areas of the world.

“…in the course of the secular competitive struggle that set the one against the other, the Venetian and Genoese regimes of accumulation developed along divergent trajectories, which in the fifteenth century crystallized into two opposing elementary forms of capitalist organizations. Venice came to constitute the prototype of all future forms of ‘state (monopoly) capitalism,’ whereas Genoa came to constitute the prototype of all future forms of

Thus Venice, the Dutch, and the U.S. all represent a corporate/national strategy of organization, Braudel’s “Phoenician Model”, while the Genoese-Iberian and British represent the cosmopolitan/imperial process of accumulation. These regimes of accumulation represent alternative strategies for capital accumulation and reorganization of the world economy, one rooted in accumulation by extension of the world economy to a new spatial scale and one rooted in accumulation by intensification of the world economy within already established spatial dimensions.

“This recurrent revival of previously superseded strategies and structures of accumulation generates a pendulum-like movement back and forth between “cosmopolitan-imperial” and “corporate-national” organizational structures, the first being typical of “extensive” regimes, as the Genoese and the British were, and the second of “intensive” regimes, as the Dutch and US were. The Genoese and British “cosmopolitan-imperial” regimes were extensive in the sense that they have been responsible for most of the geographical expansion of the capitalist world-economy. Under the Genoese regime, the world was “discovered”, and under the British it was “conquered”.
The Dutch and US “corporate-national” regimes, in contrast, were intensive in the sense that they have been responsible for the geographic consolidation rather than expansion of the capitalist world-economy. Under the Dutch regime, the “discovery” of the world realized primarily by the Iberian partners of the Genoese was consolidated into a system of commercial entrepôts and joint-stock chartered companies centered in Amsterdam. And under the US regime, the “conquest” of the world realized primarily by the British themselves was consolidated into a system of national markets and transnational corporations centered in the United States.” (Arrighi, 1994; pp. 219).

This process of reoccurring transformation masks an underlying secular trend, where each movement in the pendulum swing is also the reorganization of the world economy at an increasing scale of power and complexity from those before. Therefore, the reoccurring transformations of the world economy were both a process of qualitative and quantitative differences in the scope and scale of the regime of accumulation.

“This alternation of extensive and intensive regimes naturally blurs our perception of the underlying, truly long-term tendency of the leading agencies of systemic processes of capital accumulation in increase in size, complexity and power. Then the pendulum swings in the
direction of extensive regimes, as in the transition from the Dutch to the British, the underlying trend is magnified. And when it swings in the direction of intensive regimes, as in the transitions from the Genoese to the Dutch and from the British to the US regimes, the underlying trend appears to have been less significant than it really was” (Arrighi, 1994; pp. 219).

Arrighi goes on to argue that if you control for the swings between intensive and extensive regimes you can clearly understand and see the ever more powerful blocs of governmental and business organizations developing in historical capitalism through the internalization of various costs to overcome the contradictions of capital accumulation itself. Arrighi is arguing that he is “controlling” for swings between intensive and extensive regimes by comparing the four cycles of regime accumulation he lays out; the Genoese, Dutch, British, and US. Building upon this idea, we can control for these swings from a quantitative standpoint as well; through the manifestation of capital in the built environment, the rise and fall of the city in time and space.

Finally, each hegemonic power embarks upon a process of ideological development which holds its organizational structure out as the model to be emulated by the rest of the world, including urban development. An understanding of urbanization and the urban ‘built environment’ means an understanding of historically based, ideological and technological developments which are used to define different versions of modernity. Thus, a transformation of the world economy is the transformation of urbanization and
urban development with new cities that serve as the political, economic and symbolic presentation to the rest of the world system and create a new global urban distribution.

“…in the modern world system the hegemonic state represents nothing less than the future world and people come from other countries to see their future in the land of the hegemon. In the 19th century, entrepreneurs came from different parts of Europe and the USA to see northern England with the view to building new Manchesters in their home country. In our century both New York, with its skyscrapers, and Los Angeles, with its suburbia, have been commonly viewed as cities of the future… By defining others’ future in its own present, the hegemonic state accrues a remarkable cultural power to define modernity and thus restructure the world in its own image” (Taylor; 1994, 363-4).

Our urban transformations, based upon regime accumulation, can be compared and contrasted with specific attention paid to points in time which coincide with the ‘signal crises’ of historical capital. If we consider changing capital accumulation patterns in the built environment, how cities are constructed and organized, as the central variable in the historical development of a world-economy, the similarities and differences of regimes of accumulation in historical capitalism can be parsed out from the underlying trend of increasing scale and complexity.
“…the size and organizational complexity of the leading agencies of these successive regimes has been increasing…

At the time of the rise and full expansion of the Genoese regime, the Republic of Genoa was a city-state small in size and simple in organization, and which held very little power indeed. Deeply divided socially, and poorly dependable militarily, it was by most criteria a weak state in comparison with and in relation to all the great powers of the time, among which its old rival Venice still ranked fairly high. Yet, thanks to its far-flung commercial and financial networks the Genoese capitalist class, organized in a cosmopolitan “nation”, could deal on equal terms with the most powerful territorialist rulers of Europe, and turn the relentless competition for mobile capital between these rulers into a powerful engine for self-expansion of its own capital” (Arrighi, 1994; pp.217)

“At the time of the rise and full expansion of the Dutch regime of accumulation, the United Provinces was a hybrid kind of organization which combined some of the features of the disappearing city-states with some of the features of the rising nation-states. A larger and far more complex organization that the Republic of Genoa, the United Provinces “contained” sufficient power to win
independence from Imperial Spain, to carve out the latter’s sea-borne and territorial empire a highly profitable empire of commercial outposts, and to keep at bay the military challenges of England by sea and France by land. The greater power of the Dutch state relative to the Genoese enabled the Dutch capitalist class to do what the Genoese had already been doing – turn inter-state competition for mobile capital into an engine of self-expansion of its own capital – but without having to “buy” protection from territorialist states, as the Genoese had to do” (ibid; pp.217-218).

Conceptualizing this oscillation between regime type and the increasing size and complexity of the containers of power is shown in Figure 1.1 below. Using Arrighi’s conceptualization of the changing world historical regimes of accumulation, we can consider the organization and reorganization of the built environment in world historical capitalism as part and parcel of urbanization and the spatial articulation of the city in time.
Figure 1.1: Organization of Hegemonic Regimes of Accumulation

<table>
<thead>
<tr>
<th>Regime Type Cycle</th>
<th>Intensive</th>
<th>Extensive</th>
</tr>
</thead>
<tbody>
<tr>
<td>City-State → Nation-State → Global State</td>
<td></td>
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</tr>
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</table>

- Genoese
- Venetian
- British
- Dutch
- United States

*Based upon Giovanni Arrighi’s “Evolutionary Patterns of World Capitalism” in *The Long Twentieth Century*

Inherent in this assumption is the understanding that capital formation in the built environment is an essential element in the formation of regimes of accumulation. The built environment becomes an essential component to establish a concise division of labor to the larger processes of production, exchange, and consumption to which the regime is embedded in at a particular point in historical development. As David Harvey points out; “…the urban process implies the creation of a material physical infrastructure for production, circulation, exchange, and consumption” (Harvey, 1985; 13-14). In the development of new regimes of accumulation, capital becomes fixed in the built environment, the production of value and surplus value is facilitated by fixed spatial arrangements and changes in the built environment are the results of new and greater concentrations and complexities for the accumulation of historical capital.
Hohenberg and Lees (1985) argue that the evolution and control of urban space has been quite dynamic in history. But this development of urban space was not at the economic whims of capital but rather caught in a dynamic of historical conditions, state and market forces and ultimately some element of random probability. “As was true of technology, the economics of capitalism were more effective in promoting urbanization than in coping with it. In this perspective, the various checks to the free market, from archaic ordinances to modern monopoly power, may have been saving graces rather than obstacles to progress, achieving or preserving many valuable but “unprofitable” features of the townscape…” (Hohenberg and Lees, 1985; 291).

Ultimately they argue that capital cannot cope with the valuation of urban space because its valuation is not based upon its utility or intrinsic value alone but rather in combination with its spatial location and the social conditions of the environment. The social-spatial value is based upon its accessibility to the needs of capital and labor. In this way the valuation of urban land is in a constant state of flux, where the needs and access to a piece of land yesterday may not hold tomorrow.

“[T]here is a perpetual tension between changing needs and the townscape inherited from the past. Many observers have noted that cities never seem to be finished. In addition to actual construction, there are always both projects for the future and land uses that cry out for change…Although often attributed to growth or external change, this tendency toward instability and disequilibrium is arguably inherent in the workings of the market. It seems to exist even when
no overall growth of population drives the processes of “outward extension and internal reorganization” (Smailes 1968:87)… Rewards to the ownership of urban land are unrelated to the activity undertaken there, but totally responsive to what happens elsewhere. All urban land ownership is, in this sense, speculation; every land-value change is a windfall” (Hohenberg and Lees, 1985; 291-292).

The development or redevelopment of the built environment however, is an expensive proposition which requires large amounts of capital to be invested or reinvested in the process. Through this process, by which capital becomes fixed in the built environment, the cities of the new power are made and remade to further the material expansion of the world economy and ultimately increase the value of capital itself. The city itself can be remade but the opportunities and availability of options are limited through the dynamic of historical conditions of a social-spatial relationship.

As a new material expansion becomes hegemonic, other cities and urban spaces will invest in their own redevelopment to ‘catch-up’ with the new model of urban growth and its image of modernity. This process will continue as long as the investment in the fixed capital of the built environment is capable of producing the material expansion of capital itself through the reorganization of space which enables higher profit margins and valuation. However, at the point at which it no longer serves its purpose, the rate of profit from the built environment and therefore its value to the self-expansion of capital ends,
the cities of the hegemon will be cast aside, de-valued, as capital pulls out to specialize in high finance.

This marks a key historical point in time for the understanding of changing urban forms. The point where the material expansion of capital is no longer successful in the production of the built environment marks a key turning point in the spatial arrangement of urbanization in historical capital. This corresponds directly to Arrighi’s (1994) argument that the recurrence of financial expansions in the history of capitalism was essential to understanding the point of fundamental reorganization of the system. The “signal crisis” in historical capitalism to a regime of accumulation was the tipping point where the system was reorganized (Arrighi, 1994).

However, it potentially marks a crisis in the built environment as well. A ‘signal crisis’ in the regime of accumulation indicates a crisis of the city as well. To use Harvey’s term, a “switching crisis”, is of particular interest because it affects the built environment. The geographical nature of this process is one element of the total crisis which, “…is particularly important in relation to investment in the built environment because the latter is immobile in space and requires interregional or international flows of money capital to facilitate its production” (Harvey, 1985; 13). A crisis of capital accumulation is a crisis in the form and function of the built environment; the city who’s very being was built to transpose the social-spatial relationship of capital to the world through its organization.

If the leading hegemonic power ceases to redevelop and define urban formation through the spatial arrangement of capital, rising powers are able to catch up and surpass the previous urban spatial arrangement brought forth under the declining power. Alternative
developments in the built environment may begin to emerge as competing powers remake the built environment to suit a new round of the material expansion of capital and the perception of modernity in the form of the city itself. Therefore, it is the precise moment where capital switches to specialization in high finance that offers a window into the organization and reorganization of the global built environment and offers us Braudel’s “perspectives” which “interrupt the calm flow of history… [and reveal] the precariousness of the previous equilibrium and the strengths of the one which was replacing it” (Braudel, 1984; pp. 32).

This is not to say that cities will be entirely abandoned in this process; instead it is precisely the ‘signal crisis’ of hegemony which offers the windows into the organization of capital in the built environment as alternatives and competitors emerge to challenge the supremacy of the declining urban form. The alternative perspectives can take on a variety of forms and it is this diversification of possibilities which must be parsed out.

First, the specialization in high finance itself requires large investment in key aspects of the urban forms to facilitate command and control functions; such as the ‘world cities’ of the late twentieth century. As David Harvey states; “[F]inancial markets, like money itself, embody immense powers of centralization in the midst of the greatest possible dispersal of powers of appropriation. This permits the concentration of key decision-making functions for global capitalism in a few hands (like J.P. Morgan) in a few urban centers (like New York and London)… It also tends to consolidate the hierarchical geographical ordering of financial centers into a system of authority and control that is as much self-serving as it is facilitative of balanced accumulation” (Harvey, 1985; pp.205).
Second, this “switch” is not a set date or time but represents a process of switching where the reorganization of urban space may still have profitable opportunities for the expansion of capital. This expansion can be realized after the de-valuation of fixed capital in the declining city form and the redevelopment or reinvestment in new models of the built environment. As we will see, the consumption of space, in parts of the built environment, remains highly profitable well after the signal crisis and a switch to high finance has occurred, through the production of a built environment for consumption.

However, it is precisely the shift to high finance from which large quantities of capital become mobile and seek returns outside the core of the hegemon and ultimately provide the opportunities for new urban centers to catch-up and overtake the former centers of urbanization in both scale and capacity. It is in this new spatial arrangement of the urban world where the crisis of the current urban order and its associated distribution and the crisis of alternatives will be found. Ultimately a new urban distribution will eventually emerge. However, the current task is to understand what alternatives are possible, based on the historical conditions which have existed prior and may once again emerge in the reorganization of the urban environment towards a new formation of the distribution of cities.
Section 1.2:

City Size Distributions in Time and Space

Traditionally, the scale of urban development has been explained by a simple economic state. The more resources an urban development has access to, the larger it will become and consequently the more power it accumulates to acquire more resources. Thus, at any given point in time and space, urban centers are distributed in such a way as to replicate the power and role of that center in a larger context, whether local, national, regional, or global. But these distributions are not static associations but constantly shifting ones reflecting the changing nature of political, economic and social processes which are driving them. In this way, city-size hierarchies are the distribution of urban population in space which reflects a particular political-economic strategy and shifts in these urban distributions are important indications of changing global processes of historical capitalism which can be empirically measured through time.

Chase-Dunn and Willard (1994) argue that there exists a literature about city-size hierarchies in premodern settlement systems such as (Kowalewski, 1982; Lightfoot and Feinman, 1982; and Nissen, 1988) but there exists no broad comparative study of city size distributions across the world over a long period of time. They examine “the relationship between the processes of political centralization and decentralization and changes in the relative population sizes of cities located within interacting political/military networks” (Chase-Dunn and Willard, 1993; pp. 3) offer a comparative historical approach to the changing structure of the world system.

The use of urban populations as the unit of analysis is based upon the idea that;
“large settlements and especially large cities require greater concentrations of resources to support their large populations” (Chase-Dunn, 1993; 4). This follows the arguments of Taagepera (1978a) where population is suggested as an indicator of power since the city and/or state must have the ability to concentrate enough resources to support the population levels of the settlement. “In many systems…we have reason to believe that relations of power, domination and exploitation do affect the distribution of human populations in space. Many large cities are as large as they are because they are able to draw upon far-flung regions for food and raw materials. If a city is able to use political/military power or economic power to acquire resources from surrounding cities it will be able to support a larger population than the dominated cities can, and this should produce a hierarchical city size distribution” (ibid; pp. 4).

Other scholars have noted that in the absence of other historical indicators, populations can used as proxies since the size of a population can be considered an indicator of economic, political, or social power. When considering the urban changes in northern Europe, Eric Lindberg notes; “In the unfortunate absence of trade statistics and other data, the best way to trace the relative economic development of expanding Hamburg on
the one hand and stagnating Lübeck and Danzig on the other is in terms of population data” (Lindberg, 2009; pp.8).

Chase-Dunn and Willard (1993) argue that a settlement size hierarchy will follow a rank-size rule. The rank-size rule, also known as Zipf’s Law in the social sciences, is an observation of social scientists in which the second largest city will be ½ the size of the largest city, the third largest city will be 1/3 the size of the largest city and so and so forth. This distribution thus follows a straight line when the populations of the cities are logged.

Related to the Pareto distribution is the rank-size distribution, expressed as $P=(K)r^{-q}$, where $R$ is the city rank, $q$ and $K$ are constants, and $P$ is city size (DeVries; 87). “The values of $K$ and $q$ can be estimated as a simple linear regression by ordinary least squares. If the array of cities arranged in order of their size yield a good fit, the city size distribution can be represented by a straight line….with a slope of $-q$, and is called a lognormal distribution” (ibid; 87).

Economic theory defines Zipf’s Law as a “steady state” distribution of cities in a geographic area which forms a power law where “…the number of cities with population greater than $S$ is proportional to $1/S$. Zipf’s law for cities is one of the most conspicuous empirical facts in economics, or in the social sciences generally” (Gabaix, 1999; p739). Under this argument, urban forms will take on a log-normal, straight-line distribution, based upon the logged population size, where the largest city in a geographic region constitutes the top of the distribution, the next city will be half the size of the largest city, and so on down the entire urban distribution of the region. “To visualize Zipf’s law, we
take a country (for instance, the United States), and order the cities by population: No, 1 is New York, No, 2 is Los Angeles, etc. We then draw a graph; on the y-axis we place the log of the rank (N.Y. has log rank \( \ln 1 \), L.A. log rank \( \ln 2 \)), and on the x-axis the log of the population of the corresponding city (which will be called the “size” of the city)… the slope of the curve is very close to -1… In terms of the distribution, this means that the probability of the size of a city is greater than some \( S \) is proportional to \( 1/S \)” (ibid; 739-740).

**Figure 1:2 Theoretical Distribution for Zipf’s Law**

Brian Berry argued that the formation of this type of urban distribution, specifically Zipf’s rank-size rule, is consistent with central place theory where an urban system should attain a steady state equilibrium whose individual cities vary in size in a stochastic process. Berry uses the concept of entropy maximization, that any system is subject to constraints and thus the rank-size rule is the most likely probability pattern to justify the likely spatial distribution within that system. Thus, the rank-size rule represents a finished or efficient form of urban development in a system of cities (Berry, 1961; de Vries, 1984;
Hohenberg and Lees, 1985). Underlying this development is Gibrat’s ‘law of proportionate effect’; “….which holds that city growth is proportional, on average, to city size. More precisely, all cities of a given size are thought to have an equal probability to grow at the same rate” (DeVries, 1985; 88).

Paul Krugman has argued that Zipf’s Law is an empirical fact in the United States but one without a theoretical explanation. “The size distribution of cities in the United States is startlingly well described by a simpler power law: the number of cities whose population exceeds S is proportional to 1/S… At this point we are in the frustrating position of having a striking empirical regularity with no good theory to account for it” (Krugman, 1996; 399).

Volker Nitsch(2001) argues there are two lines of research dealing with urban hierarchy distributions, specifically Zipf’s Law. One is to provide an economic rationale for the development of city distributions where “…[t]he basic aim is to build a model which generates a city size distribution that obeys Zipf’s Law. However, while it may be possible to show that an urban hierarchy model produces a Zipfian distribution for certain specific parameter assumptions, the main difficulty of these attempts is that they do not explain the actual key feature of the rank-size rule: the robustness for a wide range of countries and time periods and, in effect, economic conditions” (Nitsch, 2001; pp. 20).

The second line of research for dealing with Zipf’s Law is to mathematically derive the rank-size rule as the result of a random growth process. Citing Paul Krugman, Nitsch argues that “…[t]he basic underlying idea is that there is scale invariance in the growth rate of cities. Because cities display on average the same pattern of growth at all scales,
size would be more or less irrelevant. If this assumption is correct, however, then it is possible to show that the resulting distribution of cities is also scale-invariant and can be described by a power law” (Nitsch, 2001; pp.20).

Deviations from these lognormal distributions are not taken as alternative urban development processes but instead are argued as symptoms of disorder; the most common is the presence of cities which are ‘too large’ and thus distort the distribution. Numerous explanations for the deviations have come from multiple disciplines in the social sciences including Sociology. Charles Tilly (1964) attributed this symptom of disorder to ‘political instability’. While Alejandro Portes and John Walton (1976) attributed it to colonial domination in Latin America and E.A Johnson (1970) to an impoverishing economic imbalance; all of which created an imbalanced urban system where one or more central cities – the ‘primate city’ – became ‘too large’ in comparison to their corresponding counterparts.

Others simply choose to ignore these cities as aberrations which cannot be accounted for but do not undermine the overall value of the rank-size distribution.

“Zipf’s law is not quite as neat in other countries as it is in the United States, but it still seems to hold in most places, if you make one modification: many countries, for example, France and the United Kingdom, have a single “primate city” that is much larger than a line drawn through the distribution of other cities would lead you to expect. These primate cities are typically political capitals; it is easy to
imagine that they are essentially different creatures from the rest of the urban sample” (Krugman, 1996; 41).

However, this line of reasoning rests on as assumption that cities will always attract populations according to their preexisting size rather than through political-economic conditions which vary through time and space. Known as Gibrat’s law of proportionate effect, this reduces deviations from a log-normal distribution as examples of ‘imbalance’, where one or more cities has grown too large in comparison to the rest of the urban distribution.

Hohenberg and Lees (1985) argue that the law of proportional effect can be biased due to a variety of circumstances such as the “…annexation of suburbs or industrial centers by a metropolis or a conurbation, the “birth” of new towns, stochastic or chance disturbances in growth, or a bias in interurban migration in favor of movement from small to large places… On the other hand, a reversion to the mean, or inverse relationship between size and rate of growth, is also theoretically plausible and is observed in many distributions” (Hohenberg and Lees, 1985; 230).

They go on to argue later that if the rank-size rule is to be something “…more than a mathematical curiosity, it should have some sort of normative property. For one thing, the rule can serve as a standard against which to describe actual urban size distribution (Hohenberg and Lees, 1985; 347 emphasis added). Several attempts have been made to this effect. Robson (1973) examined the upper end of the size distribution to classify unbalanced urban distributions as either oligarchy or primacy. While de Vries (1981 &1984) periodized early modern European urbanization into stages based upon
movement in the rank-size distribution. Hohenberg and Lees criticize these attempts arguing that “…it is unclear why a certain degree of primacy or oligarchy should imply an incomplete or degenerate stage of urbanization (Hohenberg and Lees, 1985; 348).

Following this logic, instead of considering deviations from this log-normal distribution as a symptom of disorder we can instead embrace these deviations as important moments in time and space where the urban distribution offers a unique window from which to view hegemonic rise and fall. Since the concentration of resources represents a political-economic process, it can be hypothesized that urban populations represent a political-military hierarchy of the world system and not an outcome of simple economic processes. In a pure economic situation, a city would only represent the needs of a geographic region to produce and facilitate production and exchange between different economic groups. Thus, any urban system would have a limited amount of merchants, bankers, and production capabilities.

An urban system which develops beyond these limited functions represents a social-political decision to organize, extract, and concentrate (or decentralize) more functions in the urban environment than would thus be otherwise needed.

“[W]e have reason to believe that relations of power, domination and exploitation do affect the distribution of human populations in space. Many large cities are as large as they are because they are able to draw upon far-flung regions for food and raw materials. If a city is able to use political/military power or economic power to acquire
resources from surrounding cities it will be able to support a larger population than the dominated cities can, and this will produce a hierarchical city size distribution” (Chase-Dunn, Alvarez, and Pasciuti, 2005).

The movement between a system of cities which operate in a distribution either above or below the Zipf’s Law “norm” is an urban distribution based upon the socio-political influences of dominant power(s) and/or the nation state in which the urban centers lie. This thesis contrasts with those who have emphasized the geographic conditions used as explanations for variations in distributions, such as constriction of space by a mountain range or other geographic feature. Additionally, if the underpinning theoretical argument for the system of cities is their interconnection; geographic differentiation should be negligible.

This thesis is supported by the work of several recent scholars including White, et al. (2005). White and his colleagues examined urban hierarchy distributions between 430 BCE and 2005 CE using the data from Chandler and Fox (1974) and UN estimates of populations from 1950, to create a q exponential model of urban hierarchy development. Basing their measure on work in fractality, which deals with a “broad class of hierarchically organized and self-scaling processes and satisfies our requirements for a suitably general function with which to model city size distributions historically” (White, et al. 2006; pp.2-3). They argue that by creating generalized monolog plots based upon a function of q, a logarithmic function, the slope of the distribution can be measured as the function approaches a power law.
In this instance, the lognormal, Zipfian distribution, is only one instance of the power functions of the model, where Beta reaches a value of approximately 2, and thus other power functions of the distribution can also be traced out. (White, et al. 2006; pp.3).

“Thus, the Zipfian distribution for large cities becomes a special case subsumed under a more general distribution for cities of any size with a parameter q, relevant to urban hierarchy theory and not sensitive to size but to region or historical period, along with a parameter k that is relevant to historical change in the scale or total populations of differently sized cities in an urban hierarchy” (White, et al, 2005; pp.3).

The expression of the entire process, or function, then can be obtained from the use of Weighted Least-Squares Regression (WLR). The use of WLR allows the authors to attempt to control for the varying precision in the estimation of historical populations and the generation of random errors. However, White, et.al. make no note of how the weights are known; there is no discussion of the error rates in estimated populations, especially the longer term historical estimates of Chandler and Fox. This can be a significant problem to any WLR method as the assumption underlying this process assumes that weights are known exactly and can be estimated precisely relative to one another (Carroll and Ruppert, 1988; Ryan 1997).

Despite this drawback, they produce a high fitting measure of urban hierarchy distributions over a very long historical period and a measure which shows the upper
slopes of city size distributions “exhibit regular shifts in the structure of urban hierarchies” (White, et al., 2005; pp. 9). The shifts of urban hierarchies operate in a pattern of ‘synchronicity’ within Eurasia and between “low-q (~1.5, egalitarian) and high-q (~2, hierarchical) city-size hierarchies” (White, et al., 2006; pp. 7). The authors link this synchronization of urban hierarchies to “long-term historical wave phenomenon” of Schumpeterian K-waves and Modelski L-waves incorporating network-economic theory with processes of land and naval transport strategies due to international wars and changes in the political organization of states. (White, et al., 2006; pp. 17). Ultimately, they fail to explain how K-waves and L-waves create a systemic pattern of urban change over the course of several millennia.

Despite this theoretical dead end we are left with an important historical understanding of urban distribution. If we can reject the depiction of Zipf’s law as an invariant historical process of urban development, then we need a coherent theory of how the growth and decline of cities can vary historically based upon changing political, economic, and social conditions of the world-economy.

Further, if Zipf’s Law is not an invariant historical process but a specific manifestation of urbanization and urban development in time and space, then we can reconsider some interpretations of urban hierarchy in the literature. Specifically, attempts to explain the historical development of urban distributions through measures of urban hierarchy can be reconsidered to see if a longer temporal consideration of urban change and a broader conceptual prism for urban organization provide alternative explanations for the perceived continuity of Zipf’s Law.
Section 1.3: Conceptualizing Systemic Cycles of Accumulation as Urban Cycles of Accumulation: An Alternative to Zipf

We will use Arrighi’s (1994) conceptualization of systemic cycles of accumulation as the theoretical framework by which to differentiate power in the urban distribution. Here we return to Arrighi’s distinction between ‘state monopoly capitalism’ and ‘cosmopolitan capitalism’ and the “ever increasing scale and complexity” of the regimes to consider the changing nature of the urban distribution in the world-economy from the fifteenth century to the present.

We can hypothesize that successive hegemonic orders produce successive distributions of urban systems where the urban distribution itself is an intertwined part of the economic and ideological processes of the regime of accumulation. Therefore, the expanding urban development of the latter part of the 20th century through the present does not represent the dislocation of urban development from political and economic conditions of the world but rather the reorganization of urban development’s as a new hegemonic order emerges in the twenty-first century. The ‘slum cities’ of the third world and the ‘world cities’ of the first world are not disparate elements of competing interests but unified elements of the integrated global process of historical capitalism.

That political and economic organizations can operate in distinct spatial formations based upon different distributions of power requires some clarification of the concept of complexity. Drawing from the critique by Crumley (1995, 2001), who criticized definitions of complexity as being focused solely upon hierarchical structures and
patterns of inequality (Crumley, 2001; pp. 32), we will consider different organization complexities in spatial formations. Thus the concept of complexity can be expanded to embrace more than a Hierarchical structure, such as Zipf’s Law, to include a Heterarchical structure; where increasing complexity in time and space does not necessarily correspond to an increasing rank-ordered system of organization. Crumley defines heterarchy

“…as the relation of elements to one another when they are unranked or when they possess the potential for being ranked in a number of different ways. For example, power can be counterpoised rather than ranked. Thus, three cities might be of the same size but draw their importance from different realms: one hosts a military base, one is a manufacturing center, and the third is home to a great university…The relative importance of these community and individual power bases changes in response to the context of the inquiry and to changing (and frequently conflicting) values that result in the continual reranking of priorities” (Crumley, 1995; pp. 3).

This provides a comparative conceptual tool to consider the configurations of power relations in urban development during both periods of stability and instability and a dialectical approach to changing urban forms that is conceptually distinct from the overall increasing scale and complexity of the changing world-economy. “In the multiscalar…dialectical relation between ranked and counterpoised power one
apprehends process. The ultimate in complexity is not hierarchy but the play between hierarchy and heterarchy: across space, through time, and in the human mind” (Crumley, 1987; pp. 163).

If the current theorization of the rank-size rule is invariant to the historical conditions of urban development, we need a conceptualization capable of considering alternative arrangements of power in the built environment and the spatial organization of complex urban distributions. A conceptual lens of urban distributions which can consider the organization of both hierarchy and heterarchy in the world economy under successive regimes of accumulation.

The reinterpretation of previous historical analyses of urban distributions rests upon the reconceptualization of urban distributions as being variant based upon the political and economic conditions of historical capital. Hierarchical ordering of urban development represents one possible organizational strategy for the accumulation of capital through the built environment. However, it is one strategy for the economic and political differentiation of urban forms in the world-economy. Alternatively, we can conceptualize an alternative spatial arrangement to the urban distribution through a heterarchical organization of cities where the counterpoised dimension of power facilitates the expansion of capital itself.

In this way, we can consider a hierarchical distribution as the focus of power into a concentrated and highly ranked spatial formation and a heterarchical distribution as the differentiation of power throughout an urban distribution resulting in a more egalitarian spatial relationship of large city sizes. These structural reorganizations of cities will
follow a pattern of urbanization based upon each regimes use of governmental and business strategies to become dominant.

The changing nature of the urban built environment, the development and redevelopment of the city in time and space, reflects the strategies of power that a state organization embarks upon to redevelop the capitalist system in its own image. Thus, the Venetian, Dutch, and US powers utilized a strategy that differentiated itself, to fully incorporate new markets and economic opportunities into the world-economy and created a system of complexity based upon heterarchy. While the Genoese-Iberian and British powers utilized a strategy of expansion to first ‘discover’ and then ‘conquer’ the world within a highly complex system of hierarchy. Each redevelopment of power was accomplished through the reimagining of the built environment to incorporate the increasing scale of development and the internalization of costs necessary to remake the world order.

We can thus hypothesize that an intensive, corporate-national, type of urban organization will form a distinct heterarchical urban distribution, meaning that there will be a pattern of urbanization to fully incorporate and exploit the dimensions of the world economy and whose complexity will be defined by demographically equivalent cities. While an extensive, cosmopolitan-imperial, type of organization will form a pattern of hierarchical, concentrated, urbanization where a few urban centers are demographically dominant in the world economy. Thus reflecting a clearly defined and ordered vertical power distribution based on a more traditional understanding of increasing complexity of power.
Extending Arrighi’s conceptualization of hegemonic regime types, the possibility of a new, emerging, regime of accumulation in the twenty-first century should be based upon an ‘extensive’, ‘cosmopolitan-imperial’ strategy which will geographically expand the world system. Since the US hegemony was an ‘intensive’ regime which consolidated the previous expansion of British hegemony, a new hegemonic power should follow a course of expanding the world economy to include areas and regions which were not connected in the US system. The incorporation of previous geographic regions, which had removed themselves from the world system under the US ‘intensive’ hegemony, (the former Soviet bloc and China) have increased the world system both geographically and demographically and should redefine the distribution of cities towards a new, concentrated, manifestation of power and complexity.
If each period of hegemonic order creates conditions which manifest themselves in different forms of urban distribution then their competing periods of systemic chaos should show strong indications of urban redistribution, as the dominant cities of the previous hegemonic order diminish and their roles are usurped by alternative cities which embark upon the global stage as alternatives to the previous form. The ‘signal crisis’ of hegemony is thus both a shift in the economic relationship of the regime to the rest of the world and a shift in the political and social conditions upon which that relationship had been established. Both of these relationships are subsumed in the built environment of the urban distribution and thus the signal crisis of capitalism is a signal crisis of the built environment as well.

From the theoretical lens put forward here, we can return to Mike Davis’ lamentation over the expulsion of labor-power into the mega-slums of the Global South and instead
consider the incorporation of massive new reserves of labor into concentrated urban forms as the possibility for a new round of capital expansion and accumulation in the twenty-first century. The addition of more than 1 billion people from China alone represents a substantial increase in the global labor force; A global labor force which is being consolidated into a predominantly urban labor force.

Under these conditions it is possible to hypothesize that the current urban developments, noted by Mike Davis and others, are actually the result of an urban redistribution which directly reflects the changing political and economic conditions of the world, including a shift in the center of capital accumulation towards Asia and the growing importance of China and India in the future. As David Satterthwaite has noted, “[t]he growing number of large Asian cities reflect the region’s growing importance within the world economy (and Asia has many of the world’s largest national economies). In addition, historically, Asia has had most of the world’s largest cities for most of the last three millennia” (Satterthwaite, 2005; 2). If Asia and specifically China represent a new possible reorganization of the structural conditions of global capital, then the rise of Asian cities is both a reflection of their power and a lens into the future of orientation of the twenty-first century. After all, you do not redevelop the political and ideological center of a nation (i.e. Beijing) simply for international games but rather for the focus of the world to see what can be offered in the new century. The new spires of success must push the limits of our imaginations, even as the new shanties of the poor challenge our sensibilities.
Section 1.4:

The Question of Demographic Size and Geographic Space

The accuracy of estimating the total number of residents for an urban area remains highly questionable and problematic. Many historians, archaeologists, sociologists, and even economists have tried various means of estimating populations by using standard multipliers and complex formulas for making inferences from historical records. Even differences in the physical size of a settlement, amount of area devoted to housing, the number of stories per house, or even the issue of what constitutes the extent of an urban area remain highly debated issues (Pasciuti and Chase-Dunn, 2002). These questions continue today with modern cities. Do we define a city by its political boundary or by the contiguous built environment which may cross all or part of numerous municipal and organizational jurisdictions?

The most complete estimation of urban populations is to include the continuous built environment, the uninterrupted urban space that can extend far beyond the political demarcations of the urban form, as political differentiation of urban space and the economic integration of urban space are often different conditions within a city.

This is not to say that political definitions are irrelevant, far from it. In fact, it is the political demarcation of urban space, between local boundaries of specific cities and national boundaries of city systems that have important consequential effects of the ability of capital to utilize and exploit the built environment at different points in time, a point we will take up later when discussing national distributions of cities embedded within the global distribution of cities. However, for comparative purposes, estimates of
population within the contiguous built environment are preferable so as to ensure we are comparing equal economic forms, regardless of political and social differentiation.

The most complete data on historical urbanization comes from *Four Thousand Years of Urban Growth* by Tertius Chandler (1987). His endeavor encountered many problems and suffered from limited information from text sources as well as incomplete archaeological data. Chandler developed the art of the “multiplier,” a method for converting estimates of population density and the spatial size of a settlement into estimates of the total urban population. While this method had some success it was greatly limited by the difficulty of accurately estimating the average population densities of different settlements. Others, especially anthropologists who have done cross-cultural studies of human settlements (e.g. Brown 1987) have used a variety of methods to improve upon Chandler’s approach but Chandler’s remains the single, most comprehensive, database of historical populations to date.

Three other key databases were used in conjunction to the Chandler database by de Vries (1984) and Bairoch (1988). Both de Vries and Bairoch based their compilations of urban populations on Chandler and Fox’s 1974 study, *Three Thousand Years of Urban Growth*, which creates a discrepancy between the populations as Chandler made significant changes and updates to his research in the years between volumes. However, de Vries careful study of European populations between 1500 and 1800 and Bairoch’s independent research in both Europe and Latin America provide key overlapping information about historical urban populations throughout the period of study in this dissertation.
To reconcile the numerous discrepancies between these three central works, from which the original database was built, a measurement error model was established, primarily based on the large amount of documentation regarding populations in London and Paris, to establish a likely population range and determine the closest, most accurate estimation from the three sources where they overlapped. This has the advantage of providing multiple sources for certain estimates but also the disadvantage of having to choose between diverse estimates of urban population for others (See Appendix I). This was then completed by information on contemporary urban populations, reconciled from a variety of sources including the *World Urbanization Prospects* reports conducted by the United Nations and available census information from local and national governments.

Finally, the database has been continually augmented by the authors own research into contemporary and historical information from secondary sources. This has included blogs and discussions of current questions surrounding estimates of the populations of the largest cities in the world today and information gleaned from updated information since the original estimates were conducted. For example, the estimates for London in the nineteenth century are mostly from the recent work of the economists Ball and Sunderland (2001) while the estimates or Madras are from the work of Lewandowski, (1975) (See Appendix I).

In some cases, this includes estimates of historical populations for which I alone am responsible. Based on textual or information about the built environment of an historical city I have devised my own estimate of the likely population using the measurement error model and an augmented ‘multipler method’ similar to that used by Chandler, Bairoch, and de Vries. Thus, the estimates of the population of Naples and other Italian cities in
the sixteenth and seventeenth centuries are the authors based on information regarding estimates of the physical area of the city and the reported values of hearth taxes during the period.

From this a large but highly incomplete database emerged, for although the database is as comprehensive as possible, given existing information, there are still large gaps both temporally and spatially. Much of the database has estimates in 50 year intervals, during which large changes can occur within city populations that are not tracked and possibly lost over such a large temporal period. Spatially, the level of information between many regions of the world are not uniform as de Vries explicitly only sought to estimate European populations while Bairoch primarily focused on Europe and Latin America. Chandler is the most comprehensive but his information was likely limited by the resources available at the University of California library where he conducted his research.

Further, the ability to find estimates, regardless of reliability or accuracy, of small urban populations is nearly impossible. There is no, broad scale scholarship regarding small urban centers globally over large historical periods. Therefore, it is impossible to develop a complete rank-size distribution for any historical period until the contemporary era. To offset this problem, only the largest cities at any given point in time were considered.

Finally, if the changing nature of urbanization is to be defined through understanding the dispersion of populations in time we must also define the dispersion of cities through space. The geographical context can no longer be the nation state but is instead the interconnected network of urban forms at any given time. Utilizing Chase-Dunn and
Hall’s (1993) concept of Political Military Networks and the spatial bounding of what they referred to as the Central network; “the intersocietal system which engulfed all others and which became the global political economy in which we now live” (Chase-Dunn and Willard, 1993). By utilizing this definition, a ready spatial boundary is added to understanding the interconnected nature of the urban hierarchy distribution during different periods of hegemonic organization.

Therefore, our database of urban populations is spatially bounded by the Political Military Network of Chase-Dunn’s “Central Network” so that the geographic dispersion considered for cities in the fifteenth century is significantly smaller than that of the later centuries. Thus, the ‘discovery’ of the world and its ‘conquering’ are both considered as part of the extension of the geographic scale of the world-economy. Through the geographical expansion of cities included in the dataset, as the Americas, Asia, and other geographical areas are incorporated into the world-economy, the number of cities considered in the urban distribution increases. For example, cities in China are not considered in the sixteenth century urban distribution but are a significant part of the database and the distribution by the nineteenth century and the extensive regime of the British Empire.

This means that the database of city sizes changes over time and therefore the number of cities considered in the urban distribution also changes. Part of this is due to the increasing geographical expansion of the world-economy through time and part is due to the increasing availability and reliability of estimates of urban populations as we approach the twentieth century. Under this condition, the number of cities considered in the urban distribution is not constant and is generally increasing. From 11 cities in the
fifteenth century, to 14 by the sixteenth, and ultimately reaching 25 cities per year
beginning in the nineteenth and through the twentieth century’s.

Nitsch (2001) argues there are three ways to define the size of the database for
understanding distributions. “The problem is compounded when deciding – for the
purpose of practicality – to limit the size of the sample and to consider only the upper tail
of the distribution. Then, there are basically three ways to define a cut-off point” (Nitsch,
2001; pp. 23). To use metropolitan areas above a fixed size, to define a relative cut-off
point, or use a fixed number of cities. All three pose certain problems. Both a fixed size
cut-off and relative cut-off, over time, can lead to an increasing number of cities in the
dataset, as urban populations in general are almost always increasing. This can create a
situation where any results may be distorted simply by an increasing number of cities in
the dataset over time. Using a fixed number of cities also faces the problem of missing or
misrepresenting the distribution since the dataset would not be capable of adapting to an
increasing urban demographic. In general though, the lack of appropriate city data is the
central feature which restricts any dataset that attempts to deal with urban populations
over time. It is therefore the limits of the various datasets available for use, and the
limitation to empirical analysis which must be emphasized here.

In this process we proceed to a fourth way. The original database included the largest 25
cities in the world for the entire time period; a fixed number approach. However, due to
the changing spatial dimensions of the world-economy, discussed previously, those cities
which were not geographically located within the Political Military Network of
expanding capitalism from Europe were then excluded from consideration in the urban
distribution at each time point. Thus, this database and the associated urban hierarchy
distributions derived from it, is originally based on the use of a fixed number of cities but then modified to understand the changing dimensions of geographic space in the rise of the capitalist world-economy creating a database of varying size base not on a relative demographic cut-off point but on a relative geographical cut point.

The differing of the size of the database from which to construct urban hierarchy distributions throughout the historical time period has potential pitfalls. The primary of which is that the changing sample size of the historical database would artificially create changes in the perceived distribution of the urban hierarchy over time. However, we have two reasons to challenge a critique of this nature. One is that despite the generally increasing number of cities, throughout the historical time period examined, the urban distributions continue to shift between hierarchy and heterarchy. If the increasing number of cities, from which the upper tail of the distribution is being derived, were driving the empirical evidence the resultant distributions should show a linear trend of either steadily increasing or decreasing urban hierarchy. Instead, the distributions illustrate a starkly non-linear trend of urban distribution, regardless of the changing number of cities in the distribution.

Second, Hohenberg and Lees (1985) consider rank-size distributions between 1750 and 1950, in 50 year increments, using the city size populations of Chandler and Fox (1974). They then compare these rank-size distributions to develop ratios of urban populations between the predicted population size to the actual size for different positions within the European hierarchy. The city ranks, at intervals of 5 (i.e. the 5th, 10th, 15th,..40th), are then compared to identify points of divergence from the rank-size distribution.
The results are that the ratios of predicted vs. actual population sizes vary very little between the different ranks at each time point. If the ratio for a particular time point is more than 2.0, then almost all ratios for every rank will also be in the 2.0-3.0 range for the entire time point. If the ratio for a rank is less than 2.0, then almost all ratios will be less than 2.0 in that time period. This implies that the variation inherent in a rank-size distribution is fairly robust, in that if the variation is measured at the 10th, 20th, or 40th case it appears to generally exhibit an approximately equivalent result for the urban ratio during that point in time. If the ratios are time invariant, or at least robust enough to not offer significant differences in results based upon a changing number of cities in the distribution, we can have some additional certainty in the results of the urban distributions outlined below. The unstandardized point for the urban hierarchy ratio due to a steady increase in the N of the sample through time should not create a significant false pattern as an artifact of itself.

**Table 1.1: Rank-size order in the European urban hierarchy, 1750-1950**

<table>
<thead>
<tr>
<th>Rank</th>
<th>1750</th>
<th>1800</th>
<th>1850</th>
<th>1900</th>
<th>1950</th>
</tr>
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<tr>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>1.6</td>
<td>1.4</td>
<td>0.9</td>
<td>1.1</td>
<td>2.1</td>
</tr>
<tr>
<td>10</td>
<td>2.0</td>
<td>2.0</td>
<td>1.5</td>
<td>1.5</td>
<td>1.9</td>
</tr>
<tr>
<td>15</td>
<td>2.6</td>
<td>2.3</td>
<td>1.6</td>
<td>1.4</td>
<td>2.4</td>
</tr>
<tr>
<td>20</td>
<td>2.3</td>
<td>2.4</td>
<td>1.7</td>
<td>1.6</td>
<td>2.6</td>
</tr>
<tr>
<td>25</td>
<td>2.5</td>
<td>2.5</td>
<td>1.8</td>
<td>1.9</td>
<td>2.7</td>
</tr>
<tr>
<td>30</td>
<td>2.7</td>
<td>2.8</td>
<td>1.8</td>
<td>2.0</td>
<td>2.9</td>
</tr>
<tr>
<td>35</td>
<td>2.8</td>
<td>2.9</td>
<td>1.8</td>
<td>2.1</td>
<td>2.9</td>
</tr>
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<td>3.0</td>
<td>3.1</td>
<td>1.9</td>
<td>2.2</td>
<td>3.0</td>
</tr>
</tbody>
</table>

*Table B.1. Hohenberg and Lees (1985) Appendix B, pp. 348*
The relative size from which an urban hierarchy distribution is determined appears to be invariant to the larger urban patterns which underlie it. Given the consistency seen in both the historical data being examined and the additional empirical examination of Hohenberg and Lees, the relative nature of the cut-off points used in the dataset should have a negligible impact on the overall analysis.

Ratios of urban hierarchy distributions were used rather than the more common log-normal hierarchy distributions. As outlined above, log-normal urban hierarchy distributions rely on Ordinary Least Squares Regression to create a coefficient of urban hierarchy from which to measure and make comparisons across time. This method has several drawbacks but for our purposes the most important one is the violation of a basic assumption of the method; the linear relationship between the variables. As outlined above, there is no reason to assume hierarchy in the urban distribution. The possibility of heterarchy in an urban distribution precludes trying to fit a linear regression line to the data and attempts to identify oscillations between hierarchy and heterarchy would needlessly be complicated by attempting to generate coefficients of varying linear fits.

Therefore, a ratio of urban distribution was generated for each time point in the dataset. This ratio allows us to consider differences in the upper tail of the total urban distribution to identify points of differentiation between cities of relatively equal size and those of substantial difference; points of Hierarchy versus points of Heterarchy. Further, since ratios allow comparisons between values, there is no need to log the city population sizes. Since the database only considers the largest cities in the world-economy at each point in time, the general demographic increases which occur over history are already accounted for by considering the ratio of the cities rather than their logged values.
Section 1.5

Patterns of Urbanization in Macro-Historical Perspective

One of the more recent attempts to consider historical urban development and organization through hierarchy distributions was by Volker Nitsch (2001). Nitsch develops a series of Transition Matrices for his selected countries in Europe. A transition probability matrix starts from an initial distribution of cities in a nation divided into different size groups. The matrix then describes how the given cities are redistributed over time into different categories. (Robson, 1973; De Vries 1984; Eaton and Eckstein 1997; Nitsch 2001) “Specifically, each cell of the matrix gives the proportion of cities which start with a given size in an initial year (rows) and move to a particular size group in the final distribution (columns). Thus, each row, for example, shows the probability that a city remains in its size groups or transits to any other group” (Nitsch, 2001; pp. 44-45).

Due to the limited size of the historical dataset and the shifting pattern of which cities appear in the data over time I have not replicated these transitional matrices. However, where larger and more comprehensive data does exist we can consider the outcomes of these matrices in context to the larger ‘global’ distribution observed in the data. Specifically, Nitsch examines 10 European countries transition matrices using data from 1870-1990. His considers the changing matrices’ in 40 year periods and finds an intriguing pattern to the overall results. In describing the first 40 year interval of 1870-1910 he states,
“…there is convincing evidence that large cities tend to grow faster than the rest of the distribution. Thus, existing differences in city size increase further between 1870 and 1910. The later years, however, the pattern of divergence appears to fade out. While the sign of the relationship between initial size and subsequent population growth is ambiguous for the period from 1910 to 1950, the results become unequivocal in the final 40-year period [1950-1990]. In all countries, the coefficient on the initial level of population is negative, suggesting that the size distribution of cities is getting more equal over time. The finding of convergence is statistically robust for six of the ten countries in the sample: Denmark, Italy, the Netherlands, Portugal, Sweden and Switzerland” (Nitsch, 2001; pp.57-59).

Nitsch explains this changing pattern of divergence in the first 40 years and convergence in the last 40 years based upon historical stages of industrial development. Arguing that in the initial stages of industrial development large cities benefited from the growing urbanization but that later improvements in transportation allowed a more balanced system of urbanization to develop and the smaller cities to begin to catch up to the larger ones; thus creating a convergence in the last part of the 20th century.

However, the argument of transportation improvements alone seems limited to explaining a convergence in the urbanization rates of European countries when a major
transportation revolution, the building of the railroads, had already occurred in the 19th century leading to a well documented expansion of cities and urbanization in England and the US (North and Thomas, 1968; Pred, 1980; Schivelbush, 1986; Krugman, 1996). That a transportation ‘revolution’ of the 19th century, where the speed of the transportation, over previous modes of transport, created a dynamic impetus for new urban expansion and offered the possibility of ever more interconnected urban network both within nation states and transnationally throughout Europe cannot be ignored (Schivelbush, 1986).

Instead, what is intriguing in Nitsch’s findings is the possible correlation with a previous period of capital crisis and larger political and economic changes in the world system as Europe transitioned from a political-economic system dominated by the British hegemony in the waning decades of the 19th century to the rise of a system reoriented around an American hegemony in the 20th century. The divergence of city size, which Nitsch identified in the 1870-1910 period, correlates strongly with a period of hegemonic transition.

This early correlation illuminates a theoretical hypothesis that changes in the distribution of cities is not a backward looking measure – meaning that urban development is not a laggard to changes in the organizational structure of the world economy – but possibly a forward looking measure, where changes in the rank-size rule may offer an empirical ‘signal’ for a crisis of capital accumulation and precede changes in the redistribution of political and economic power.
Thus, the divergence from the log normal, Zipfian, distribution, expected by Nitsch, may be correspond to a ‘signal crisis’ of British hegemony; an important historical point that reveals both the limitations and opportunities of strategies of urban development;

Braudel’s moments which reveal “… the precariousness of the previous equilibrium and the strengths of the one which was replacing it” (Braudel, 1984; pp. 32).

Hohenberg and Lees (1985) attempted to understand the historically changing conditions of urban distribution from 1750 to 1950. They developed a series of urban hierarchy ratios using the logged values of the city populations and various cut-off points over their 5 time points.

They begin by noting the existence of urban hierarchy, an unbalanced urban distribution, in the early period of their dataset which then approaches a Zipfian distribution and thus proceed on the assumption that this represented a move towards an economically integrated urban distribution. “…[N]ote that the ratios decrease toward those of a perfect rank-size pattern between 1800 and 1850, only to move away from it again in the twentieth century” (Hohenberg and Less, 1985; 347-348).

They go on to argue that this rhythmic pattern may correspond to the rise and fall of free trade which peaked in the 1860’s and consider if the rise of nationalism may have slowed and reversed the process of developing a more unified European urban system between 1850 and 1950. While the process of free trade and the emergences of multiple new nation states are important elements in this process, they are not a wholly satisfying answer to explain their findings or our more historically encompassing pattern to which their analysis fits into.
Rather, Hohenberg and Lees, like Nitsch, have caught important points of transition in history. In this case, the transition from the Dutch to the British led world economy of the eighteenth century and then again from the British to U.S. led world economy of the twentieth century. While this is not out of synch with their answer of shifting flows and doctrines of free trade and the development of a more unified urban system in Europe, these changes were part of a larger complex of capital accumulation and hegemonic transition that not only encompassed the European urban system but subordinated it to a larger and more complex global urban order of capital formation.

Therefore, using the database and the conceptual lens outlined in Chapter 1, this section will investigate the patterns of urbanization throughout the six centuries from 1400 to 2010. Using the ratios of the largest urban centers calculated for the 18 time points in the dataset, the study finds a striking regularity to the pattern of urbanization and systemic cycles of accumulation.

First, the urban distribution is not static or linear through time. As hypothesized in Figure 1.3, the urban distribution oscillates between periods of high urban inequality, hierarchy, where the largest city is has a significantly larger population than its closest rivals in the distribution, and periods of heterarchy, where the cities at the lower portion of the distribution are only marginally smaller than the largest city.

This oscillation between hierarchy and heterarchy corresponds to the ‘pendulum-like’ movement of the intensive, corporate-national, regimes of accumulation and the extensive, cosmopolitan-imperial regimes of accumulation. Periods of increasing hierarchy are also periods of extension in the world-economy; the geographic expansion
of the previous regime through the ‘discovery’ of the world by the Genoese-Iberian regime of accumulation and its ‘conquering’ by the British regime. Periods of increasing heterarchy are also periods of consolidation of the world-economy through intensive regimes of accumulation; the Dutch and U.S.

The cities which define these changing ratios of hierarchical and heterarchical power, vary in their geographical and political position to the hegemonic regime of accumulation. Meaning, in the early centuries of our distribution, the predominant cities which are driving the ratios of hierarchy and heterarchy do not correspond to the states whose political position defined that era’s regime of accumulation. During the ‘discovery’ of the world, under the Genoese-Iberian regime of accumulation, and its intensification, under the Dutch, the largest cities of the distribution continued to be in the eastern Mediterranean, first by Cairo and then by Istanbul.

Cairo, a city whose political and economic fortunes changed drastically with its subjugation to the Ottoman Empire and Istanbul, the rebuilt incarnation of wealth and power in contrast to its western rivals stood at the apex of urbanization and the reorganization of historical capitalism over two centuries, until the beginning of the eighteenth century. Although the size and complexity of regimes of accumulation increased through the two time periods they had not yet reached such an all encompassing position to subordinate urban development directly and instead influenced the changing nature of urban demographics through the organizational and economic influence exerted over the world-economy.
In contrast, it is not until the ‘containers of power’ moved from city-states to the full manifestation and development of the nation state, with the rise of the British regime of accumulation, that the largest city in the urban distribution would also be the unquestioned center of power and wealth in the world economy, the city of London.

Further, the points of transition, as the distribution begins shifting between heterarchy and hierarchy, correspond almost perfectly to the ‘signal crises’ of each hegemonic regime of accumulation in the world-economy. The signal crisis of historical capital and the recurrence of financial expansions, outlined by Arrighi (1994), are marked by a crisis of the built environment; the point in time where the spatial arrangement of the world-economy is reoriented away from the continual redevelopment of the predominant built environment. The financial expansion of capital in the hegemonic power necessarily implies the redirection of investment to find new opportunities for its expansion outside of the declining profits and organizational form of the existing regime of accumulation. This emergence of new levels of mobile capital seeking opportunities for expansion is immediately absorbed by investment in competing and alternative forms of the built environment where increasing valuation and higher profit margins can still be found through new visions of modernity. Thus the signal crisis is also an urban crisis of the previous regime of accumulation, where the built environment and organization of the city is immediately devalued and undercut by the investment opportunities of alternative spatial organizations with greater potential for the continuing expansion of capital.
The consideration of ratios of urban distributions which are not invariant but rather can capture the dialectical nature of changing historical capital opens a unique window into understanding both the built environment of capital accumulation in the city and the changing nature of regimes of accumulation throughout the world-economy. By reducing Zipf’s Law of urban hierarchy from a manifest force of urban integration to being one potential outcome among many for the organization and development of the urban environments, we incorporate more than just an economic understanding of urban growth and decline; instead offering a perspective that emphasizes the interaction among political, economic, and social dimensions of the city.
Chapter 2:

City-States and the Origins of the Modern World System, 1400-1750

The changing urban distribution with the development of historical capitalism takes many forms. In this chapter we will examine the patterns of urbanization surrounding of capitalist city-states as the world economy shifts from being centered in the Mediterranean to the Atlantic throughout the sixteenth and seventeenth centuries and its progressive incorporation into larger and more complex forms of state power.

At the beginning of the fifteenth century, the city-state of Venice is at the height of its economic power. The capitalist world-economy is primarily confined around the Mediterranean and the profits of trade and manufacture with the East, through the Byzantine Empire and the city of Constantinople but more and more through the Ottoman Empire and the ports of the Levant and Egypt. The city of Venice reigns supreme in this endeavor, having subordinated the remnants of Byzantium and ensured special privileges of trade at the port of Constantinople to the monopolization of much of the mercantile opportunities in the eastern Mediterranean. By cherry-picking the most lucrative and strategic elements of the Byzantine Empire and consolidating them into its own quasi-national, Republic of Venice, the Venetian city-state established an intensive, corporate-national, systemic cycle of accumulation in the Mediterranean in the fourteenth century.

As the major competing city-state with Venice for market opportunities with the Levant, Genoa was finally defeated in the War of Chioggia in 1381, which left Venice the central mercantilist power in the Mediterranean and capable of excluding foreign merchants from the most lucrative markets in the East. This would lead to a crisis of economic
opportunities for the city-state of Genoa, unable to expand its own capital through the mercantilist activities of trade and manufacture and seeking new opportunities for profits, the city-state of Genoa would turn to the imperial states of the Iberian Peninsula and an ensuing age of discovery would extend the world-economy beyond the inner sea. A process which would see the containers of power expand in size and complexity as the cosmopolitan nature of Genoese capitalism is combined with the imperial designs of Iberian empire.

The changing organizational form of accumulation can be clearly distinguished by the pendulum like swings of intensive and extensive regimes. At the beginning of the fifteenth century, the Venetian regime of accumulation has consolidated and intensified its hold on the world-economy of the Mediterranean through its defeat of competing city-states and the subjugation of the remnants of the Byzantine Empire in Constantinople. In 1400, the largest city in the database is Paris with approximately 280k inhabitants\textsuperscript{2}. Although impressive as the largest urban center of its day, the city is only 3.5 times the size of the smallest city in the database, Rouen, with an estimated population of some 80k.

\textsuperscript{2} Chandler (1987) estimates that 280k people lived in the city of Paris while Bairoch (1985) places the population at 275k inhabitants. A difference of only 5k is inconsequential to the overall dynamic of the urban distribution we are considering.
Figure 2.1: Hierarchy and Heterarchy: The Rise of the West 1400-1750

Even more striking is the overall urban distribution itself. In Figure 2.1, we see the heterarchical distribution of city sizes quite readily. Although Paris has a little more than 100k more inhabitants than the second largest city in the database, Tabriz, a gentle down sloping line could easily be drawn through the urban distribution. The counterpoised power of Venice, through the intensive organizational structure of the world-economy at its height in 1400, is a near perfect heterarchical distribution of the largest cities in the period.

A shallow logarithmic line fits the data extremely well; we find a highly significant fit, an $r^2$ of .85, at $\alpha=.001$. This reinforces the urban heterarchical ratio in Figures 1.4 and 2.1. The city-states of Venice, Granada, and Milan all figure quite prominently in the urban
distribution and although the hegemonic city-state of Venice does not define the distribution at its peak, its articulation and those of its counterparts in the overall distribution becomes quite obvious.

**Figure 2.2: Heterarchical Urban Distribution in 1400**

The great city of Venice, whose galleys plied the Mediterranean from one end to the other, defined the urbanization and development of the period. That it did not define the height of the distribution however, should not be a surprise. For one, the city-state itself was organized in a decentralized state of urbanization in relation to its possessions in Terraferma; to be discussed below.

For another, the containers of power embodied in capital accumulation, the city-state of Venice itself, was too weak in comparison to alternative territorial powers to outperform their ability to concentrate people and resources. While Venice was a regime of accumulation for historical capital, the container of power had not yet developed in size and complexity to fully incorporate the organizational logic of alternative strategies for
capital accumulation; a process which would begin with the resurgence of the Genoese in the sixteenth century.

By 1550, and the signal crisis of the Genoese-Iberian regime of accumulation, the urban distribution in the world-economy has altered significantly. Whereas the largest city in 1400 was only 3.5 times the size of the smallest city in the database, the rise of Istanbul (Constantinople) and the relative stagnation or even decline of populations in Venice, Paris, Tabriz, and others from the 1400 distribution, shifted the urban ratio to 8.25.

A logarithmic fitting line portrays a much steeper slope than that of 1400 with an even better fitting measure of .94. This nearly perfect fit to a logarithmic distribution with a steep slope articulates an astonishingly well defined hierarchical distribution at the height of the Genoese-Iberian regime of accumulation through the extension of the world-economy and the ‘discovery’ of the world.

**Figure 2.3: Hierarchical Urban Distribution in 1550**
Finally, in 1750 the urban distribution had again shifted, from a hierarchical distribution under the Genoese-Iberian regime of accumulation to the intensive regime of accumulation centered upon Amsterdam and the Dutch Republic. With a ratio of 4.6 between the largest city in the database, London, to the smallest city, Gwalior, the distribution is not quite as heterarchical as that which we observed in 1400 but is significantly different from the hierarchical distribution in 1550.

As we can see in Figure 2.4, this flattening of the urban distribution to a heterarchical organization is driven by two processes at either end of the distribution. First the stagnation of Istanbul throughout the two centuries of declining power in the Mediterranean; its population in 1750 is slightly smaller than its population in 1550. Second, London emerges in 1750 to become the largest city in the distribution, with roughly the same population as Istanbul had in 1550. Therefore, while Istanbul declined from its position as the largest city in the database, as the gateway to the trade and manufactures of the east, its replacement has only reached the same level of population that Istanbul had achieved two centuries prior. The top of the urban distribution throughout the rise of the Dutch regime of accumulation has remained unchanged.

At the bottom end of the distribution the same has not occurred. The population explosion of smaller urban centers in the dataset has significantly flattened the distribution as the counterpoised power of the Dutch regime of accumulation intensifies and consolidates the world-economy it inherited from the Genoese and Iberians.

Again, we can fit a logarithmic line to the distribution which portrays a much shallower slope than that of 1550 and while not the near perfect fit observed in 1750, its $r^2$ of .88
articulates a conspicuous heterarchical distribution at the height of the Dutch regime of accumulation.

**Figure 2.4: Heterarchical Urban Distribution in 1750**

The impressive correlation between the distribution of major urban centers and regimes of accumulation in historical capital is clearly evident. Even more striking is the correspondence to the ‘signal crises’ of the regimes as the declining profits of capital entail a wholesale reorganization of the built environment to facilitate new processes of production, circulation, and consumption capable of overcoming the previous limits to capital accumulation.
Section 2.2:

Urban Demographics in Macro Perspective

Jan de Vries (1985) outlines the interesting trends the levels of urbanization and demographic growth show throughout Europe during the period 1500 to 1800. While urbanization is often considered a steady growth process which gradually gained momentum over centuries to the onset of the Industrial Revolution; actual urban growth and development patterns show a starkly different picture where regions, territories, and time periods experience vastly different patterns.

First, periods of demographic growth and stagnation do not correspond to urban growth or stagnation. de Vries outlines an interesting demographic contradiction between urban growth and overall demographic growth:

“…urban growth began slowly in the first half of the sixteenth century…, quickened its pace dramatically in the century from 1550 to 1650, and then decelerated, reaching a low point in the first half of the eighteenth century… The curious feature of this chronology is not the divergence between the Mediterranean countries and the rest of Europe: it is the fact that major increases in the percentage of the population resident in cities in non-Mediterranean Europe was at least as much a phenomenon of demographic stagnation and decline as it was of demographic expansion. The second half of the sixteenth century was the only
period in which rapid population growth and rapid urbanization occurred together. The latter half of the eighteenth century was not such an era; in almost all areas it was at best a period of very sluggish urban growth. On the other hand, the major gains of northern European urbanization were made during the seventeenth century, particularly during the first half, when total population grew little if at all.

This portrait of urban and rural populations following divergent paths, and of major gains in urbanization being made in an era of ‘crisis’ rather than in one of general economic expansion, is not the expected one, and is certainly difficult to reconcile with the benign, gradual process of long-term urbanization” (de Vries, 1985; pp.40)

This striking process of urban growth and expansion during the three centuries outlined by de Vries is however, quite marked by the shift in capital and the strategies for its expansion which occur during this period. The sixteenth century, where de Vries identifies as a period of “rapid population growth and rapid urbanization”, corresponds to the full extension of the Genoese-Iberian relationship with the “discovery” of the world beyond the Mediterranean. The extensive regime of Genoese capital and Iberian imperialism increased the scale of European involvement in the world and the resultant explosion of economic possibilities through access to a cacophony of new commodities set off a corresponding economic and demographic expansion.
The urban explosion of the sixteenth century is not distributed evenly throughout the cities of Europe. Instead, urban growth is more pronounced at the lower end of the urban distribution than at the top end. What is quite striking is the lack of rapid growth in large urban centers throughout this period, where only a few cities at the top of the urban distribution grow and thus push the urban distribution itself towards a hierarchical form. The majority of urban growth is maintained in smaller cities which are not large enough to even appear in the ‘world’ dataset and would be at the very tail of any urban hierarchy distribution.

Overall urban growth throughout the sixteenth century averaged 29%, of which the largest percentages came mostly from cities with populations under 50,000, as can be seen in Table 2.1. This explosion is felt throughout Europe for both the urban and rural populations. The Dutch Republic, which sees its population increase a staggering 285%, from roughly 350,000 at the start of the sixteenth century, to a population in excess of 1 million by 1650 (de Vries and Van der Woude, 1992; pp. 51-52) is one example of the massive demographic shift which occurs from the ‘discovery’ of the world under the extensive regime of the Genoese and Iberian cosmopolitan-imperial capitalists.

The 46% overall growth for cities of populations between 100k and 200k is entirely driven by the growth of two major outliers in that category; Naples and Venice. During this time period Venice experienced a brief revival in its economic fortunes and a corresponding resurgence in its population, which had dwindled to between 100k and 115k by the start of the century, to once again peak at between 158k and 175k by 1550, only to slowly return to its demographic decline for the next century (de Vries, 1985 and Chandler, 1987 respectively); a growth rate of more than 60% within 50 years. Naples also experienced massive growth during this period nearly doubling over the course of the sixteenth century; from a population of 115k in 1500 to approximately 280k in 1600. Both cities experienced rapid changes in their economic and demographic fortunes, compared to the majority of Italian cities during the period, embarking on massive new urban expansions. The fortunes of both cities went entirely against the general trend of urban decline prevalent throughout most of Italy by the end of the sixteenth century.
However, by the beginning of the seventeenth century, the Genoese have shifted to a process of high finance, leaving their former Iberian partners with cumbersome and expensive imperial holdings throughout the world and the end to expensive expeditions of discovery. With the ‘signal crisis’ of historical capitalism, the demographic expansion of Europe comes to a crashing halt and the urban formation in the world-economy begins to rapidly shift. Looking at Table Zb again, we can see how the overall urban growth during the seventeenth century has slowed considerably, to less than half, from the growth of the sixteenth century. Even more importantly though is where the growth has changed. During the sixteenth century, urban growth was dominated by smaller urban centers of less than 50,000 inhabitants. The seventeenth century sees this growth come to almost a standstill with cities of between 30,000 and 100,000 inhabitants showing zero overall growth and cities with less than 30,000 inhabitants are, overall, growing at close to half their rate of the previous century. On the other side of this changed dynamic of urban growth are the largest cities which are now increasing at nearly ten percentage points more than the overall urban growth.

Table 2.1: Percentage Growth of European Cities by Size, 1500-1700

<table>
<thead>
<tr>
<th>City Size Category</th>
<th>1500-1600</th>
<th>1600-1700</th>
</tr>
</thead>
<tbody>
<tr>
<td>10k-20k</td>
<td>0.35</td>
<td>0.19</td>
</tr>
<tr>
<td>20k-30k</td>
<td>0.27</td>
<td>0.14</td>
</tr>
<tr>
<td>30k-50k</td>
<td>0.27</td>
<td>0.00</td>
</tr>
<tr>
<td>50k-100k</td>
<td>0.13</td>
<td>0.00</td>
</tr>
<tr>
<td>100k-200k</td>
<td>0.46</td>
<td>0.26</td>
</tr>
<tr>
<td>200k+</td>
<td>0.11</td>
<td>0.23</td>
</tr>
<tr>
<td>Overall Urban Growth</td>
<td>0.29</td>
<td>0.14</td>
</tr>
</tbody>
</table>

Source: Paul Bairoch, Cities and Economic Development, Table 11.3
It is during this time where a new built environment is being constructed in Northern Europe centered on Amsterdam and supported by a larger state apparatus in the Dutch Republic. The population of the Dutch Republic had benefited greatly from the ‘discovery’ of the world in the previous century and the subsequent beginning decline of the Spanish Empire following the ‘signal crisis’ of Genoese capital in the latter half of the sixteenth century. During the period of 1500 to 1650, the Dutch northern provinces rebelled against the Spanish crown, declared independence in 1581, and were finally recognized with formal independence at the conclusion of the Eighty Years War in 1648 (Motely, 1858).

This new urban form was manifested in the development of major urban centers which would steadily come to dominate the urban process in Europe throughout the seventeenth century and dynamically shift the urban population towards concentrated urban forms and flatten the urban distribution at the top. As Bairoch notes; “During the seventeenth century three cities, Amsterdam, London, and Paris, were responsible for 40% of all growth in urban population in Europe….By the start of the eighteenth century the twenty largest cities had a combined population of three million, representing one quarter of the total urban population of the Continent at large” (Bairoch, 1985; pp.184). The new urbanism of the seventeenth and eighteenth centuries consolidated the expansion of the previous period. The general demographic stagnation or even decline outlined by de Vries and Bairoch was countered by a consolidation to major urban forms of a new type and dynamic, leading to the overall flattening at the top of the urban hierarchy distribution throughout the intensive regime of Dutch hegemony. “This new type of city brought with it a mode of existence very different from that in smaller towns, where ties
with rural life remained closer. The opposition between town and country became much more marked… In the urban milieu this much larger size most likely fostered technological innovations of various kinds, owing to the greater division of labor and also the increased intensity in the flow of information” (Bairoch, 1985; pp. 185).

Even this does not provide a complete picture of the changing urban form which was occurring throughout Europe during this time period for geography shows an interesting dynamic in the fortunes of major urban centers. If we examine Table 2.2, there is a pronounced geographic process in urban fortunes throughout Europe that is masked by the overall urban growth in the region. While the urban percentage of the European population steadily increases from 5.6% in 1500 to 16.7% in 1850; this masks the geographical differences in urban development, stagnation, and decline which occur in different regions throughout the nearly 400 year period.

This geographical dynamic correlates to the waning and waxing fortunes of the various political and economic powers of the period. As mobile capital shifted from the Italian city-states, the built environment of the city began to decay and become devalued in these regions; both due to a lack of new capital capable for rebuilding the urban environment to new forms and heights, as well as changing economic conditions which altered the urban spatial arrangements needed to foster divisions of land and labor conducive to the increasing scale of capital itself. Without access to mobile capital to invest and reinvest in the construction and re-development of the city, the urban forms entered a long period of stagnation and decline beginning in the seventeenth century.
Belgium is the most urbanized area of Europe in the sixteenth century with the rise and
domination of Antwerp under the imperial expansion of the Spanish Empire and the
utilization of capital of the Genoese. But this rate of urbanization peaks in 1550, first
decreasing and then stagnating so that by 1850 Belgium remains less urbanized than it had
300 years prior. The Italian cities and Iberian peninsula follow this same general pattern
with a general decline in urbanization levels from the seventeenth century to the
nineteenth century. As the economic conditions of historical capital shift from the
extensive regime of Spanish imperialism and Genoese cosmopolitan finance so do the
fortunes of the built environment for a large geographical extent of Europe itself.

In the seventeenth and early eighteenth century, it is first the Netherlands and then Britain
which achieves dynamic urban growth. The urbanization of the Netherlands takes off
from the decline of Belgium as the ‘discovered’ world is full realized by the Dutch
Republic. Finally, the urbanization of the British Isles accelerated, just as the Low Countries stagnate, as the British Empire ‘conquers’ the world.

Returning to our earlier periods we can examine how the dynamic urban redevelopment of the sixteenth and early seventeenth was not a universal process of urban growth throughout Europe but a spatially conditioned dynamic based which must be considered. When Bairoch speaks of urban stagnation and decline of the seventeenth century he clearly differentiates this process by its geographic ordering. “Although on average 4 out of 10 European cities stagnated or declined in population….the ratio was little more than 4 out of 10 in Belgium and Germany, was 5 out of 10 in Italy, and was 7 out of 10 in Spain. In France, however, the proportion was only 3 out of 10, and in the United Kingdom and the Netherlands was less than 2 out of 10… In other words, 45 percent of the cities suffering stagnation or decline were concentrated in Italy and Spain…” (Bairoch, 1985; pp.185). He goes on to differentiate these cities by their economic and political roles, as either port cities, capitals, or other functions, but fails to offer a macro-historical explanation for the changing nature of the built environment and the overall geographic shift in urbanization.
Section 2.3:

Heterarchy in the World-Economy

As we noted in Figures 2.2 and 2.3 above, heterarchical distributions of urbanization occurred under the dominant role played by Venice and the Dutch Republic in the fifteenth and eighteenth centuries respectively. In this section, I will outline the similar pattern of urbanization between the city-state of Venice and quasi-state of the Dutch Republic.

It was Braudel who noted that “Amsterdam stood in the same position as did Venice to those of Terraferma” (Braudel, 1984; pp. 182). Following the observation by Braudel, we can see that the general urban distribution in northern Europe for the Dutch state was similar to the urban hierarchy of the Venetian city-state. The population of Venice in 1600 was over 150,000 but was surrounded by a well established network of cities of significant population size themselves; Verona had a population of some 50,000 while Brescia had 42,000 and Padova had 36,000. While Venice was indeed the dominant city and defined the built environment of the period, it was surrounded by a large number of urban centers with significant populations of their own. While the data for the period of Venetian hegemony which had reigned prior to the fifteenth century is too poor to utilize for comparison, we can infer some idea of the nature of the urban distribution which would have prevailed under the city-state from its situation in the seventeenth century.

When considering Venice in this period, Ciriacono notes; “A great deal of Venetian historiography is in agreement in pointing out that this unity was not realized because of

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the preponderant political-economic weight exerted by the ‘dominante’ (Venice)… it explains much of the de-industrialization of the capital, and the growth, at times silent but no less valid, of the mainland cities” (Ciriacono, 1988; pp. 43). It is unlikely that the population of Venice itself ever accounted for more than 50% of the total urban population of the city-state. Instead Venice and its surrounding territorial possessions on Terraferma, indicate a decentralized urban structure where Venice is the dominant city form but not absolute in its role.

In comparison, Amsterdam looks remarkably similar in that is was indeed a unique city in its national urban distribution and, like Venice, was part of a well established and significant group of cities with substantial populations of their own. By 1650, as Dutch power became hegemonic and began to reestablish a new urban heterarchical distribution, its national organization already reflected a very flat distribution within the Netherlands itself. While Amsterdam’s population was now over 175,000, the network of urban centers in the Low Countries included Leiden with a population of 67,000, Haarlem with 38,000 and a series of cities at, or close to, a population of 30,000 including Rotterdam, Middleburg, and Utrecht.

The origins of Dutch development were already well established in the form of an urbanized structure which reflected a multitude of major cities rather than a central focal point of political-economic and spatial concentration. The rise of Amsterdam signaled a new emphasis on the development of the urban built environment to expand and redevelop the patterns of circulation, production, and consumption of the region;

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5 Jan De Vries *European Urbanization 1500-1800*, Appendix I
increasing both the valuation of capital in the built environment but also its potential margin of profit through the spatial organization of land and labor. Schmal noted the redevelopment and intensification of the built environment surrounding Amsterdam during its emergence in the seventeenth century.

“A big part of Holland – one of the provinces that formed the Republic of the Seven United Provinces – was drawn into the development of Amsterdam. This is patent when we see how many ‘beurtdiensten’ (regular transport over water) were centred on Amsterdam and how many ‘trekvaarten’ (canals) were created during the first half of the seventeenth century, to improve the transport possibilities between the towns” (Schmal, 1988; pp. 293).

Amsterdam did not signal the development of urbanization in the Netherlands. Instead the Netherlands was already 25% urban by the beginning of the seventeenth century. This type of dispersed urban formation has been termed as “primus inter pares” by de Vries (1974) who argues that the entire region of the Dutch Republic was a metropolitan area whose origins date to the sixteenth century.

While Prak (2000), pursues this even farther by examining even the smaller towns of the Dutch Republic, noting that representation within the States assemblies went far beyond the larger urban centers with populations of more than 10,000.

“These medium and large-size towns were merely the tip of an urban iceburg…In the seventeenth and eighteenth
century, the Dutch Republic was a federation of seven provinces, each with their own provincial States. Altogether, the States of the seven provinces included the representatives of 57 different towns...And the 57 enfranchised towns still do not exhaust the roll-call of Dutch urbanization...In the north of Holland, where the enfranchised towns were thick on the ground anyway, another fourteen places had received urban charters during the Middle Ages, even though by 1600 they would strike the uninformed observer as definitely rural. Nonetheless, many of these villages built themselves strikingly urban “town”-halls during the seventeenth century, testimonies to their prosperity no doubt, but at the same time underscoring that even villages in the Netherlands could be to some extent urban” (Prak, 2000; pp. 343-344).

Dierderiks (1990) builds upon the ideas of De Vries by considering the Republic a “decentralized metropolis”. Both Dierderiks and Prak note that cities in the Netherlands specialized in key branches of industry and even key economic regions throughout the 17th century. Thus, both Amsterdam and Rotterdam were cities of international commerce; Dordrecht focused on the Rhine and Meuse river trade and Hoorn, Medemblik, and Edam committed themselves to the Scandinavian and Baltic trades (Prak, 2000).
“Delft with beerbrewing and later the ceramics industry, Haarlem with linen bleaching and Leiden with the cloth industry… Amsterdam and Rotterdam had commerce, transport and trade-related branches of industry like sugar refineries, shipbuilding and tobacco works. Amsterdam had also an important function as a financial centre. The Hague became, belatedly, the capital of a country with already too many specialized and developed cities to be able to grow into a multifunctional metropolis… this division of labour can be traced back to the very beginnings of the Dutch Republic at the end of the 16th century. Amsterdam had some features of a metropolis, but it lacked the political role, while the smaller industrial towns in close proximity to each other and to the harbour cities had the advantage of specialization and nearby (export) markets… Thus the Netherlands had a decentralized metropolis taking in the whole area of the Randstad” (Diederiks, 1990; pp. 97).

This decentralization and specialization are key features to understand the nature of Dutch urban development and form; a complexity of heterarchical power in space. The emergence of a flexible political economy in the sixteenth and seventeenth centuries which could take advantage of the labor found in the larger spatial organization of the state; the counterpoised complexity of power as the city-state’s gave way to the larger ‘containers of power’ in the nascent formation of the nation state.
Since capital was not concentrated into a single urban form, it was free to specialize and develop investments across multiple spaces to maximize the monopolistic specialization embedded into the Dutch urban form. It is this central tenet alone which De Vries and Woude (1997) hold out as a central pillar of its economic success.

“Well, the diversified character of this economy was not so much a consequence of the explosive growth of its foreign trade after 1580 as it was its precondition... By the mid-seventeenth century... a broadly diversified industrial complex absorbed perhaps 30 percent of the labor force, and a highly articulated commercial structure spread its intricate web across the country. The numerous cities formed a complex of interdependence...the industrial towns cultivating particular branches of production... The legal privileges of the cities notwithstanding, the diffusion of typically urban service functions extended far down the hierarchy of central places, even to modest villages” (De Vries and Woude, 1997; pp.696-697).

This differentiation of power and specialization of land and labor in the built environment would serve as a model for the intensive cycle the regime of accumulation would pursue and propagate throughout the world-economy of the seventeenth and eighteenth centuries leading to ever increasing competition between major urban centers as each sought to exploit the new markets which had been ‘discovered' under the previous regime. Ultimately this would culminate in a distinctly heterarchical urban distribution at the
‘signal crisis’ of Dutch hegemony with urban power dispersed throughout the world-economy.

The nature of Venetian and Dutch urban forms are a key element to explaining how their hegemonic influence, as each came to power, would begin to lead to a more heterarchical distribution of major urban centers throughout the world. Both hegemonic powers had a historically decentralized urban structure which was influential in the development of the larger ‘global’ urban heterarchical distributions of the fifteenth and eighteenth centuries respectively.
Section 2.4:

Discovery of the World and Urban Hierarchy Genesis

Returning to the urban distributions outlined in Figure 2.1, a clear pattern of increasing differentiation amongst the largest urban centers in the world economy emerged throughout the fifteenth and into the sixteenth centuries. A shift in the urban structure of the world-economy shifts towards hierarchy that correlates with the emergence of the Genoese-Iberian regime of accumulation.

The Spanish Empire sets itself apart in the new spatial arrangement of the world-economy as the extensive regime of accumulation achieves a geographic expanse which only the rising Ottoman Empire appears capable to rival. “Spain was Europe’s greatest political and military power from 1524, when the “silver fleet” started trips between America and Seville… During that long period, the kings of Spain reigned over Spain, Protugal (1580 to 1640), Spanish America, Portuguese America (from 1580 to 1640), the Balearic Islands, Minorca, the Canary Islands, Sardinia, Sicily, Naples, Southern Italy, as well as some of the wealthiest parts of Europe, the Spanish Low Countries, the Flanders, Artois, Franche-Comte’, and the Milanese. Moreover, Spain had trading posts and colonies in Africa, the Arabian Peninsula, India, Indonesia (Java Island), and the Philippines” (Tellier, 2009; pp. 321). A new extended world-economy had been discovered by the Iberian imperial powers allowing for a new economic arrangement and the expansion of historical capital.

In this economic and spatial reorganization, the city-states of Italy would play one final act in the urban formation of the world-economy, through new investments in the built
environment to reshape the physical association between land and labor in production, circulation and exchange.

“Genova La Superba...mirrored the stark world of the “offshore” Mediterranean in the fifteenth century, and in that image it cast the Atlantic world. The Mediterranean may have been outcompeted by the relocation of the center of economic flows in the North Sea and the Baltic. But the offshore world, the world on the move as we depicted it, the world capital built de novo, had a long and lustrous future before it” (Tabak, 2008; pp. 83).

The genesis of an urban hierarchy distribution in the sixteenth century is intertwined with the role of cosmopolitan capital, primarily from the Genoese, and the Imperial expansions of the large territorial states of Spain, Portugal, and the Ottoman Empires. A period of intense industrialization occurred throughout the sixteenth century as the large urban centers took advantage of the massive new markets with the extension of the world-economy to capture profits in a new economic relationship between land and labor in the built environment.

“The onset of the second sixteenth century, then, signaled long-term change in the structure and spatial distribution of manufacturing across the Mediterranean. From about 1450, the accelerating pace of urbanization in the basin was accompanied not only by a corresponding growth in
manufacturing activities but also by the agglomeration and concentration of these activities in sizeable urban centers.

Cities like Segovia, Cordoba, Toledo, Salonika, and Bursa experienced rapid growth in manufacturing as the construction of vast, unified imperial economic spaces by the Hapsburg and Ottoman dynasties provided new avenues for economic specialization” (Tabak, 2008; pp. 153, emphasis added).

Tabak offers a clear summarization of the overall urban spatial distribution of the world-economy; the agglomeration and concentration of activities into major urban metropolitan areas throughout the fifteenth and early sixteenth centuries as the imperial regimes of accumulation were augmented by cosmopolitan capital to take advantage of the massive new markets, the ‘discovered’ markets of the Iberian imperial regime and the extended empire of the Ottoman. Capital flowed to urban centers which were geographically, politically, and economically capable of harnessing the flow of new wealth to recreate a built environment centered on principles of agglomeration through the reorganization of land and labor in the built environment.

The reorganization of the European empires and their imperial capitals altered the urban demographics and power structure throughout the period. Constantinople had been captured in the fifteenth century, but it was during its redevelopment in the sixteenth and seventeenth centuries, as the economic center of the Ottoman shifted north from Cairo, that the city reached new heights and became the leading urban center, by population, for over a century. It is no coincidence that in 1450 the largest city in the world-economy is
Cairo but by 1550 Istanbul is nearly twice the size of Cairo and the largest urban center in the world-economy. The Ottoman Empire pursued a project of rebuilding the newly renamed city of Istanbul and recentering the lucrative trading with western merchants northwards.

Only a few urban centers were capable of realizing the full weight of this process however. Cities which operated at the nexus of imperial power and cosmopolitan capital were capable of redefining the concept of modernity fully utilizing their built environment to exploit the expanded world-economy. While many urban centers were able to prosper from the period of economic expansion, the upper end of the urban distribution would experience relatively little change except in the explosion of key outliers like Naples and Istanbul and the inclusion of new urban forms, in the expansion of the world-economy, to include parts of the ‘New World’ and South Asia.

After a century of nearly unprecedented economic expansion, many of the largest cities in the world-economy had remained unchanged. If we exclude the 3 largest cities in the database at 1550 – Istanbul, Cairo, and Vijayanagar – we can compare the remaining 10 largest urban centers in each time period. Paris, the largest city in 1400, with an estimated population of 280k inhabitants has declined to only 210k inhabitants by 1550.\(^6\)

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\(^6\) The estimate for Paris comes from Chandler’s (1987) dataset. De Vries (1985) estimates the population to be significantly lower, at only 130k inhabitants, which would place Paris towards the bottom of our distribution in 1550 rather than the fourth largest. However, the estimate by de Vries was discounted in the database for two reasons. In 1400, both Chandler and Bairoch estimate the population of Paris to be at or near 280k people and that by 1500 they, again, both estimate the population of Paris to be approximately 200k. In contrast, de Vries estimate of Paris in 1500 is only 100k, increasing to 130k in 1550; a distinctly different demographic pattern. However, just a few decades later, de Vries estimate for Paris explodes to 220k in 1588 and thereafter generally corresponds to Bairoch and Chandler’s estimates into the nineteenth century. Since the significantly different demographic trajectory outlined by de Vries could not be reconciled with Chandler or Bairoch, the de Vries estimates were discounted at this period in the dataset.
Tabriz had stagnated and Fez had declined by some 25k inhabitants. The cities of Prague, Milan, Granada, and others have entirely disappeared having suffered a complete reversal in their economic and demographic fortunes over the period. Ironically, if not for the expansion of the world-economy to include cities in South Asia, our urban ratio measuring hierarchy in 1550 would have been much greater than 8.25.

**Figure 2.5: Comparison of Select Urban Populations in 1400 and 1550**

Venice is the only city which occurs in both time periods and has a larger population in 1550 than it did in 1400. However, this comparison is rather deceiving since the population of Venice actually declined throughout the fifteenth century, by some 10k inhabitants, and only experienced a new demographic surge in the sixteenth century with the revival of the spice trade through the Ottoman Empire, facilitated by the new found wealth from the Iberian Empires and the silver fleets from America.
Ironically, the capitals of the Spanish Empire, Valladolid and Madrid at various times throughout the sixteenth and seventeenth centuries, never achieve significant demographic growth to be part of the urban distribution of the dataset. Only Seville emerges in the later part of the sixteenth century as a major urban center within the geographic space of the Iberian Peninsula itself. As a world-economy with weak containers of power, the city-state of Genoa reigns over the economic wealth of the Empire, while the imperial state of Spain itself is rather weak and limited. Although capable of providing protection to the cosmopolitan capital of the Italian city-states, the empire has almost no ability or ambition to develop its own centers of urban power capable of harnessing the forces of production, circulation, and exchange within Spain itself. Thus is 1675 Alfonso Nunez de Castro wrote:

“Let London manufacture those fabrics of hers to her heart’s content; Holland her chambrays; Florence her cloth; the Indies their beaver and vicuna; Milan her brocades; Italy and Flanders their linen, so long as our capital can enjoy them; the only thing it proves is that all nations train journeymen for Madrid and that Madrid is the queen of Parliaments, for all the world serves her and she serves nobody” (quoted in Carlo Cipolla, 1981; pp. 25).

This however, does not mean the Iberian regime of accumulation was not the driving force for the development of a hierarchical urban distribution throughout the period. But without a well developed state capable of facilitating the incorporation of capital itself into its organization and development, the Spanish Empire was only capable of extending
the world-economy through the coercive force of its imperial power to conquer dynamic sectors of economic potential throughout the ‘world’. Thus, even by the end of the eighteenth century, Madrid only has a population of a little more than 150,000 inhabitants; a size which would have made it comparable to the great cities of the sixteenth century but still does not rank as one of the 25 largest urban centers in the world-economy even then.

Therefore, it is several key urban centers that experience massive growth and redevelopment in the fifteenth and early sixteenth centuries which drive the reorganization of the urban distribution from one of heterarchical power to one of hierarchical power. These cities; Istanbul, Cairo, and Naples are unique as they represent specific economic and political conjunctures in the capitalist world economy but are the result of the imperial expansion of the world-economy during the sixteenth and seventeenth centuries.

As the premiere cities of the Eastern Mediterranean, Istanbul and Cairo are the gateways to the spice trade and wealth of the East. They were therefore points of great wealth and political power as the capitals of Empire, their built environments focused on controlling the trade flows through the Mediterranean, a nexus of imperial power and economic wealth. Cairo, as the capital of the Mamluks, reigned as the largest city in the urban distribution in 1450 until it was subsumed by the expansion of the Ottoman Empire at the beginning of the sixteenth century. Istanbul, as the ‘Sublime Porte’ of the Ottoman Empire, is rebuilt to serve as the center of Muslim power; its built environment transformed as the carrying trade and economic wealth of the region is reoriented north, away from the traditional centers of Egypt and the Levant.
However, Istanbul and the corresponding Ottoman Empire are intertwined with the fortunes of the Spanish Empire and the cosmopolitan capital of Genoa. The economic revitalization of the spice trade and the transfer of wealth through the Sublime Porte was facilitated by the extension of the world-economy to the ‘New World’ of the Americas and the river of American silver which flowed into and through the Mediterranean. The redevelopment of Constantinople to become Istanbul through the reorganization and revitalization of its built environment was also the buildup of the eastern gateway to the extensive world-economy of Spanish imperialism and Italian capital.

Moreover, it was also the imperial rivalry of Spain which first stunted the growth and development of the Sublime Porte in the sixteenth century. With the defeat of the Ottoman Empire at the hands of the Spanish at the battle of Lepante in 1571, the Spanish Empire ensured its domination of the Mediterranean and secured the trade and capital flows of the Italian merchants. It also marked the slow withdrawal of the Ottoman Empire from Europe, North Africa, and parts of the Near East (Tellier, 2009); a withdrawal which would open economic space for competition to Istanbul in the coming centuries. It is no surprise the demographics of Istanbul peak between 1550 and 1600, only to stagnate and then decline throughout the seventeenth century as its economic position as the gateway to the East is undermined and eventually bypassed.

Naples also operated in this nexus of imperial power and wealth but on the opposite end of the Mediterranean, in the extensive world-economy of the Iberian-Genoese regime of accumulation. As we will see in the following section, it was here that the imperial power of the Spanish Empire and the cosmopolitan wealth of the Genoese coalesced into an urban center of power and wealth capable of ensuring the expansion of capital through
the reorganization of the built environment. But unlike its rival to the east, the city of Naples was not contained within the territorial domain of either the Iberian Peninsula or the Genoese city-state.

It is these few urban spaces that redefine the urban distribution in the fifteenth and early sixteenth century, as the locus of territorial expansion is combined with the newfound economic wealth of the world-economy. Each city is defined by the Iberian-Genoese regime of accumulation but spatially distinct in specific ways due to the undeveloped nature of state power itself.
Section 2.5:

Naples: Nexus of Imperial Power and Cosmopolitan Wealth

As noted in a footnote previously, Naples was a distinct outlier from the general pattern of urban development in both the sixteenth and the seventeenth centuries. An Italian city which had lost its economic and military advantages to larger and more sophisticated powers in the previous centuries, Naples would experience a reversal of fortunes when it was conquered and subsumed into the new world-economy created by Iberian imperialism. The expansion of territorial empires in the Mediterranean during the fifteenth and sixteenth centuries changed the political and economic dynamics of the region’s cities, as Bairoch has expertly noted, but this did not end the economic opportunities of the region.

Specifically, Naples subjugation to the Spanish crown in 1503 would change both its economic and demographic fortunes as the city found itself part of a much larger governmental and territorial organization. As a Spanish vice-realm, Naples was part of a growing Spanish imperial territory which stretched both through Europe and across the Atlantic Ocean and was considered an important military bastion for the Spanish against threats from the East.

The city prospered from its place in the Iberian-Genoese extensive regime. As a bastion of imperial power and cosmopolitan wealth in the Mediterranean, the city found itself part of the vast military-industrial complex of the Spanish crown. Incorporation into the military-industrial complex of the Aragonese government greatly benefited Naples due to the development of industries for iron wares, textiles, and leather goods to equip the
military forces and by the massive new defensive networks of towers and walls built to protect both the city and the region. The incorporation of Naples into the territory of the empire offered important opportunities for the city to remake itself through investment from the Aragonese government; the capital investment to rebuild and redesign a city which could service the strategic needs of the imperial state (Petraccone, 1974; De Rose, 1988).

Even more importantly than its strategic importance to the Spanish Empire was the commercial changes the city experienced in its new role. While the Genoese-Iberian regime of accumulation was primarily about the ‘discovery’ of the world and access to markets and commodities far beyond the limits of the previous world-economy; the Iberian state was no less engaged in the Mediterranean. “…[T]he Spanish empire remained solidly anchored in the Mediterranean in part due to the sheer momentum given by the process of Reconquista and in part due to its dependence on Sicilian and Apulian cereals and on the Genoese for handling of its finances and trade” (Tabak, 2008; pp. 51). The Spanish Empire made use of its new found military dominance to ensure its control over the important grain producing areas and to force open markets to the exploitation of its financiers; the Genoese. For Naples this inclusion into the vast economic market of the Spanish Empire which stretched across the Atlantic Ocean extended its commercial horizons well beyond the former borders of the Mediterranean.

Specifically, under the Spanish viceroys, the city’s market was opened to exploitation and competition from ‘foreign merchants’; meaning merchants from Tuscany and Genoa who were often those who prospered the most under Spanish rule (Taylor, 2005). While this had the effect of obviously hurting the local merchant guilds, its far more important effect
was to open the city to the mobile capital of the Genoese-Iberian regime of accumulation at the height of its imperial expansion and economic power and the massive new overseas markets in Spain at the Americas.

“When the kingdoms of Castile and Aragon brought Naples and Sicily (and Granada) under their suzerainty, this was all but at the expense of the Genoese merchants and bankers, who by that time had become so vital to the commercial operations of the western Mediterranean that they were “operating by remote control”. Indeed, the Ligurian merchants remained in effective charge of organizing Sicilian sugar production and conducting silk trade from the island – not despite, but because, of Aragonese overrule” (Tabak, 2008; pp. 53 emphasis added).

The merchants from Tuscany and Genoa flocked to the increased opportunity to take advantage of the commercial and financial opportunities offered by the extensive force of Iberian imperialism; the favored status of the foreign merchants over the locals provided more than enough incentive and opportunity for their move into the city to realize the self-expansion of their own capital through investment and exploitation of the new market both in trade and in finance. However, this also meant Naples was able to attract large sums of mobile capital to its doors and rebuild itself into a ‘modern’ city of the age; complete with paved roads, the draining of swamps allowing new land for sale and better health conditions, centralized governmental function in the Castel Capuano, and an enlarged military capability through the expansion of the Arsenale and the city walls; in
short, all the accoutrements of modernity which transformed Naples into the largest city in the Empire (Petraccone, 1974; Matthews, 2011).

This redevelopment of the built environment occurred across a wide range of industries and specializations with the city’s entry into the new market. Woolen production became an important commercial opportunity for Naples, as did wine, olives, metal, copper, timber, and others. Although the city itself did not produce many of these products, especially agricultural ones, its merchants were central figures in the promotion and financing of the industries and who operated in and through the city of Naples (Petraccone, 1974; De Rosa, 1988). One of the most important was the development of the silk industry in the city. “This too had been carefully encouraged by the Aragonese governments in the late fifteenth century but its expansion had been much greater than was the case for wool… [T]he silk came to Naples, which was the main centre for the finishing trade, and where whole districts – particularly those behind the main square – specialized in working silk. Even if we make allowances for the approximate nature of the figures, to judge from the registrations with the two guilds it would appear that in the first half of the sixteenth century there were between …. 4000 and 10,000 silk workers in the city” (De Rosa, 1988; pp.126). A silk industry capable of covering ‘whole districts’ within the city required the use of massive amounts of capital being invested into the formation of a new built environment; invested in the reorganization of the city to extract surplus value from the production process.

The redevelopment of the built environment is not simply the building of manufactories and workshops to organize labor; the reorganization of the urban spatial arrangement goes far beyond the limited development of one building type and touches the social,
political, and economic relationships between land, labor, and capital at the center of urban growth and reorganization. These relationships play out in the total development of the city through the spatial arrangement and inclusion of commercial, industrial, and maybe most importantly, social structures of the built environment. “The importance of the silk industry in Naples was represented not only by the range of interests that were connected with it, but also by the imposing church in which the ceremonies of the guild were conducted, and by the massive hospices which the guild built and financed for the orphans of its members” (De Rosa, 1988; pp. 126).

Significant changes also occurred in the social organization of the city as the old feudal make-up of large estate holdings were broken up and both the landless and landed classes were encouraged to move into the city; a policy which ensured their proximity to the central authority of Spanish oversight. New churches and theatres were built in the city which reflected the new communities of Genoese and Florentine’s which had taken root and new estates were established in Spanish architectural styles (Matthews, 2011). In short, the built environment was utterly transformed as capital was invested into new divisions of land and labor which could be used to extract surplus value from the city itself and provided new opportunities for capital expansion to prevent, at least temporarily, the overaccumulation of capital in the already established urban spatial arrangements of the Spanish Empire. Naples, in the sixteenth century, became a beacon for the expansion of capital and the extraction of surplus value through transformation and investment in the built environment. The mobile capital of the Genoese and other ‘foreign’ merchants was utilized to a stunning degree to create a new physical infrastructure in consumption, production, circulation, and exchange in its commercial
arena; while the Spanish empire brought both internal and external peace to the city and the region for a time.

By the end of the sixteenth century, the Genoese-Iberian regime of accumulation was in decline. The military might of the Spanish Empire was under attack, facing wars with both Britain and France and insurrection in the Netherlands leading to bankruptcies and military defeats. Genoese merchants had moved from engaging in commercial activities in support of production to high finance, leaving the Spanish empire a massive and largely unprofitable territorial empire due to the declining profits from competition from her emerging European rivals. Further the Italian capital which had helped build Naples for nearly a century was now itself under crisis. “The Genoese financiers who created, managed, and profited from this systemic link between Iberian power and Italian money were themselves affected by a whole series of crises” (Arrighi, 1994; pp. 125). All of this meant a restructuring of the systemic cycle of accumulation which undermined the future potential of Naples to redevelop her built environment. “The withering away of Genoese dominance in European high finance, the progressive erosion of the power of Imperial Spain, and the break-up of the Genoese-Iberian alliance cannot be understood except in the context of the escalating competitive power struggles that made the fortunes of Dutch capitalism” (Arrighi, 1994; pp. 126).

However, Naples countered this trend, for a time, due to the investment in the built environment it had made throughout the century. The declining power of Imperial Spain and the limited economic opportunities of the Genoese did not end overnight and Naples would continue to prosper for a time in a protected bubble. Capital investment in the city was able to achieve one more round of expansion in Naples, through suburbanization, to
increase the surplus value of the land in the valuation of a new built environment – A topic we will return to in later cycles.

“As a Spanish vice-realm, Naples might have been expected to follow a parallel decline. For various reasons (one of which was the simple geographical distance from the battlefields of the Thirty Years War) that was not the case. The year 1600 marks the beginning of what is often called a "Golden Age" in the history of Naples. The city had been transformed in the mid-1500s into a modern city, the best defended and largest port city in the Spanish Empire, the second largest city in Europe (after Paris)—essentially being primed for just such a period of greatness. By 1600 a number of Spanish villas had begun to spring up along the Chiaia, opening the western part of the city to an incredible building boom of luxurious estates” (Mathews, 2011; section on Naples in the 1600’s).

The urban expansion that defined Naples for nearly two centuries is often looked upon from another perspective; one of over-urbanization and the development of a ‘primate city’. A classic view of this process is summed up by Tellier:

“…Naples of the period that followed the discovery of America… is also a classic example of a “primate city”, its demographic weight being out of proportion with the
population and the wealth of its hinterland. From a topodynamic point of view, it can be explained by the fact that, if economic development “jumps” from the center of an urbexplosion to the center of another, the population migrations do not follow, since they do not jump…the spatial distribution of production is almost always behind the topodynamic evolution. This may explain why the populations lagged in Southern Italy while the economic development had jumped to the north, which caused the suburbanization of Naples, but also its “prime city” character…” (Tellier, 2009; pp. 270-271).

Tellier quickly articulates the process of economic development between Antwerp, Genoa, and Amsterdam, following the outline of Braudel, but he reduces Naples to “primate city” status, calling it the “classical example of over-urbanization” (ibid; pp. 311) without consideration of the role which political and capital flows achieved in redeveloping the built environment of the city around Spanish Imperialism and Genoese profit seeking. Naples was not part of an unintegrated market and therefore disproportionate, it was disproportionate because it was integrated into an expanded market within specific temporal and spatial dimensions of a new regime of accumulation.

Naples was not a “primate city” because it had become out of proportion with its surroundings; it was a primate city specifically because it was in proportion to the scalar extension of the world-economy through the Spanish Empire and access to Genoese capital flows seeking returns for investment and expansion during the sixteenth century.
Through Naples flowed the imperial power of the Spanish and the cosmopolitan wealth of the Genoese; it was a city which embodied the political and economic organization of the world-economy at the height of its power in the sixteenth century. The increasing complexity of the Iberian-Genoese regime of accumulation created a new hierarchical distribution of cities of which Naples was a prime example. As a ‘primate city’,

However, the ‘Golden Age’ of Naples would only last so long. Without the capital reinvestment from the Genoese merchants, whom had primarily abandoned the pursuit of surplus capital through trade due to declining profits, the built environment of the city could not be continually remade to serve the exploitation of surplus value from land and labor. More and more the city was called upon for new taxation and military service to support the crumbling military and finances of the Spanish Empire in a coercive strategy of accumulation by force with rapidly dwindling benefit to either the people or city of Naples. “[F]inancial resources were drained out of the kingdom into Spain and those areas in which Spain was more heavily engaged in armed conflicts. Mantelli has demonstrated the size of sums that were transferred from Naples to the Low Countries, to Flanders, and to the Spanish ambassadors in Rome and in the state of Milan in the sixteenth century, and the same occurred in the seventeenth century, especially after 1630” (De Rosa, 1988; pp.131). De Rosa goes on to explain how this drainage of financial resources out of Naples had a steady and long term effect. First turning the commercial surplus of the city into a deficit and secondly forcing the government of Naples to create massive amounts of ever increasing public debt and taxes to cover the payments to the Spanish crown.
By removing all available surplus capital from the city of Naples, the built environment was steadily devalued and diminished since capital could not be reinvested in the process of maintaining the relationship between land and labor in the city. Without the reinvestment of capital to redevelop and maintain the city, the industries upon which the city had prospered were steadily undercut by other centers of production. There was no attempt in Naples to develop better quality or better production techniques since both required massive new investments of capital to again reshape the social, political, and economic conditions of the built environment, as had been accomplished a century before. By 1687 it is noted that “This robust body had fallen victim not to a sudden fever, but…to a slow debilitating disease… All those populous and great quarters of the city [of Naples] where formerly the silk was worked have now been reduced to ruined workshops and heaps of rubble. Nor can the landowners find anyone who is prepared to rebuild them. This is what had befallen ‘the district known as the Orto del Conte’… and equally to the ‘famed and wealthy square of the Armourers, which has now been reduced to a mere corner with a few merchants’ shops, where they sell more foreign cloth than Neapolitan” (quoted in De Rosa, 1988; pp. 133).

By the middle of the seventeenth century, Naples was wracked by protests and insurrection from all classes in the city and Spain was forced to rely upon force to ensure the city’s loyalty and obedience to the crown until that failed as well. In 1707, with the War of Spanish Succession in full swing and a new hegemonic power rising to the fore; what had been a crown jewel in the Spanish Empire, Naples, revolted against the Spanish viceroy and welcomed an Austrian army into her walls. But the city had long since
ceased to be a dynamic force for the accumulation and expansion of capital and would not recover.

“Naples in the year 1700 was almost dead in the water. Spanish rule, innovative and dynamic in the 1500s and early 1600s, had become harsh and corrupt in its last decades… The ferocious pestilences of 1656 and 1691 had reduced the population of the city from 450,000 to 140,000, and by the first decade of the 1700s Naples still had only about 200,000 inhabitants. It was a loss that crippled the working and merchant classes; sketches of the layout of the city in the early 1700s look the same as half–a–century earlier—no new buildings, no new streets. There had been no growth” (Mathews, 2011; section on Austrian Naples, emphasis added).

“No growth”; Naples had harnessed the power of Spain and the wealth of Italy to reshape her built environment and propel the city to new heights. Baroque Naples had been a beacon of wealth and power with an immense social diversification which consisted of many of the greatest minds of the era. Artists such as Salvator Rosa, philosophers like Bernardino Telesio, and writers like Giambattista Marino were just a few of the immense and diverse set of people in architecture, art, and music (Matthews, 2011). The city exploded like the great metropolis of the day but was always a component of the world-economy and not its heart. Capital flowed into her walls as the Iberian-Genoese regime of accumulation sought opportunities for the self-expansion of their capital. With this the
city prospered and became a central player in the changing urban distribution of the sixteenth century. However, without the internal power of the imperial state or the cosmopolitan wealth of the city-state, Naples was bled dry and ultimately burned in Braudel’s ‘high-tension’ system.
Chapter 3:

The Sunset of the City-State and the Dawn of the Nation-State: 1600-1880

Naples was an outlier to the general pattern of urban growth in smaller urban centers in the sixteenth century. A nexus of imperial power and historical capital, the city had experienced rapid urban growth while most of the major urban centers of the world-economy remained relatively stagnant. In this chapter I will outline how this general pattern of urbanization would rapidly shift, in the second half of the seventeenth century, as the Italian city-states and the Iberian Empires were countered by the rise of a new hegemony, the Dutch Republic. Under this regime of accumulation, the new emerging or reemerging urban centers of the world-economy steadily transformed the urban distribution from the complex hierarchy of power we saw in 1550 to a complex heterarchy of power by 1750.

The ‘signal crisis’ of the Genoese-Iberian regime of accumulation would alter the organizational strategy of the world-economy. The increasing competition over trade and the carrying trade led to declining profits and financial crises in the Spanish Empire. Thus, the built environment of production, circulation, and exchange which had been developed throughout the fifteenth and early sixteenth centuries was devalued and abandoned by the mobile capital of the Genoese and others. Instead, a new economic logic of historical capital sought opportunities for profit in the redevelopment of the built environment through increasing intensification and ruralization of manufacturing and trading.
This intensification of manufacturing in the world-economy was presided over by the Dutch, Italian city-states, and others. However, this intensification of manufacturing only engendered the return of profitability by its externalization outside the largest urban centers of the world-economy. This process of ruralization of industrialization, the redevelopment of the built environment through the reorganization of the economic conditions to take advantage of cheaper labor and available raw materials, would have a dramatic effect on the central urban centers which had exploded to new heights under the hierarchical urban distribution of the fifteenth and early sixteenth century.

Led by the decentralized urban formation of the Dutch, the world-economy of the sixteenth and seventeenth centuries reorganized the built environment and its associated processes of production, circulation and exchange into rural areas and outlying townships. It was here that a cheaper labor force, than that which was found in the older urban agglomerations and an increasing availability of raw materials could be harnessed for the further expansion of capital.

“The manufacturing world of the 1560-1650 period came to be distinguished by the presence of two diverging yet closely intertwined trajectories. In the wealthy quarters of the basin, the sharpening of competition among the major producers located at both ends of the Italian peninsula – Low Countries axis led to the spatial dispersion of manufacturing operations, as a competitive strategy, into the countryside, the contadi, and the Terraferma. In the outlier zones, the process of ruralization of manufacturing
started later, as in Segovia and Salonika, due to the increasing reliance of the “Italian” and northern merchants on wool imports from the Balkans and Iberia: the inability of artisans to easily obtain raw materials turned ruralization of manufacturing into a survival strategy” (Tabak, 2008; pp. 154).

Additionally, other major urban reorientations began to occur under the changing world-economy at the start of the seventeenth century. Madrid became the new capital of the Hapsburgs at the close of the sixteenth century; the capital resources which had been directed at Seville and Naples were redirected to the construction of a new imperial built environment with new opportunities for development in Iberia. While Seville remained a central commercial center of the empire, Madrid oversaw Seville and siphoned capital from it to itself. Paris, already the capital of France, was further bolstered in its counterpoised structure with Lyon due to its closer proximity to the northern markets. However, the “bi-polarity” which existed between the two cities did not end; it simply shifted once again to favor Paris and the fortunes of the Mediterranean world-economy further waned (Braudel, 1984; pp. 327).

Cairo, already devalued by its submission to the Ottoman Empire and the recentering of the economic fortunes of the Eastern Mediterranean, lost half its population in the following century to 1650 with only an estimated 175k inhabitants in the once great city. For the next two hundred years the city’s fortunes would remain limited and its population would stagnate so that by the start of the nineteenth century the city nicknamed “The Conqueror” still only had a population of some 186k inhabitants. A far
cry from its days as the predominant city in the world-economy with some 400k+ people in the fifteenth century.

Naples, as already discussed, would survive as a major urban center longer than Cairo thanks to its standing at the nexus of Spanish imperial power and Genoese and Italian cosmopolitan wealth. However, it too would be undercut and suffer a steady ebbing of its fortunes throughout the sixteenth century as the mobile capital of the Genoese was reinvested elsewhere and the Spanish Empire extracted whatever surplus capital remained within the productive functions to offset its own deteriorating financial position.

Only Istanbul, as the nexus of the Ottoman Empire and the economic trade wealth with the East, would not suffer the same deleterious decline during the seventeenth century. As a continuing crossroads of imperial power and mercantilist opportunities, the Sublime Porte of the east would remain relatively unchanged throughout the emergence of a heterarchical urban distribution and the rise of Dutch hegemony. However, unchanged does not mean unchallenged.

Although the city would not suffer the same dramatic decline of the other major urban centers in the world-economy, Istanbul would stagnate as its economic monopoly was steadily undercut. As the largest city in the world-economy in the sixteenth century with some 660k inhabitants, the city’s population would remain relatively unchanged for the next two hundred years, slowly declining to an estimated 625k inhabitants in 1750.

The stagnation of Istanbul was perpetuated by a second organizational change in the world-economy with the rise of the intensive Dutch regime of accumulation; the development of multiple competing trade routes which undermined the preeminence of
Istanbul and its corresponding foundation of wealth in the Eastern Mediterranean. The emergence of multiple competing interests during this period devalued the built environment of Istanbul as the Sublime Porte no longer held its central place in the economic opportunities for the expansion of capital.

The withdrawal of the Ottoman Empire from the Mediterranean, beginning in 1571, had intensified competition within the Near East from its economic rivals in Europe, undermining the centralized hierarchy of economic control originally established by the Ottoman in Istanbul. In the sixteenth century, the Venetian merchants began to encounter significant competition from other merchants as English, French, and Dutch traders moved into the region and where able to compete with the Venetian merchants due to a variety of factors. Key among them where the reorganization of production, the deindustrialization of the urban centers in Northern Europe, which facilitated lower labor costs and ultimately cheaper textiles.

“In the 16th century the French, the English and the Dutch entered the scene as competitors in a market the Venetians had largely had for themselves until then. They proved to be able competitors by virtue of three factors: their cheaper textiles, their ready money and their safer navigation.

The Venetian economy did not adapt itself to this challenge. We know, thanks to Cipolla and Stella, that it was what we might call the socio-economic barrier, primarily the rigidity of the guilds, that prevented a
reorganization of the textile industry” (Steensgaard, 1973; pp. 190).

While this had the effect of maintaining the Sublime Porte’s position in the sixteenth century, by the seventeenth century, the world-economy for spices and other Asian goods began to flow around the Ottoman Empire. Finally the consolidation of the Dutch trading in the Indian Ocean, by the revival of Venetian state-monopoly capitalism of the fourteenth century (Arrighi, 1994), signaled the terminal crisis of trade and continuing expansion of capital through the Mediterranean. Thereafter, the recentering of the spatial organization of the world-economy from the Mediterranean to the North Sea was irreversible and the major centers of the urban distribution, the built environment which has been so successfully remade in the fifteenth and sixteenth century, was left to decline as new centers of modernity were built.

“Not coincidentally, the coup de grace to the Serenissima’s Levant trade was also delivered by Dutch merchants – by the monopoly they established in the Indian Ocean, to be exact. Once the spice trade was dealt a fatal blow, the Venetian merchants’ majestic position in the Levant was finally opened to contestation by the northern powers who were expeditiously conferred “capitulations” by the Sublime Porte: the British, Dutch, and French merchants solidified their Levantine venture by signing capitulations in 1569, 1581, 1612, and later” (Tabak, 2008; pp. 174-175).
Neils Steensgaard (1973) noted that by the beginning of the seventeenth century Dutch merchant ships were arriving in Constantinople (Istanbul) with cargo of spices, pepper, nutmeg, and cloves to sell (Steensgaard, 1973; pp. 172-173). Thus by 1625 Omar Talib, a learned Turk in the Ottoman Empire, comments;

“Now the Europeans have learnt to know the whole world; they send their ships everywhere and seize important ports. Formerly the goods of India, Sind, and China used to come to Suez, and were distributed by Muslims to all the world. But now these goods are carried on Portuguese, Dutch, and English ships to Frangistan, and are spread all over the world from there. What they do not need themselves they bring to Istanbul and other Islamic lands, and sell it for five times the price, thus earning much money. For this reason gold and silver are becoming scarce in the lands of Islam” (quoted in Steensgaard, 1973; pp. 173 and Lewis, 1958; pp. 118).

This economic strategy was not an unintended dynamic of consolidation of the trading opportunities of the East but a direct strategy to undermine the trading centers of the former Mediterranean and in the process devalue their built environments. Thus, Chaudhuri (1965) notes that Court documents in London specifically note the idea to export indigo to the Mediterranean to undermine the trade process in Italy and Turkey in the same manner to which the spice trade had already been achieved.
“In the beginning to the East India trade the transportation of pepper into Turkey and other parts adjoining diverted the trade of pepper and it was hoped the same might be brought to pass by sending indigo into Italy and Turkey, which would hinder the bringing of that commodity into those parts” (quoted in Chaudhuri, 1965; pp. 175)

Throughout the sixteenth and seventeenth centuries, the center of the world-economy moved north from its historic position in the Mediterranean, a process that first began with the emergence of Antwerp in the fifteenth century, but one which steadily gained momentum under the Dutch regime of accumulation. This spatial reorganization of the world-economy coincided with the intensification of competition for economic opportunities and the expansion of capital itself. Thus, like Naples before it, the city of Istanbul was not the heart of the world-economy but a component of it, facilitated and coerced first by the Genoese-Iberian regime of accumulation and ultimately burned by the Dutch regime of accumulation.
Section 3.2:  

The Containers of Power

The central difference, between the organization of the world-economy by Venetian city-state and the reorganization of the world-economy by the Dutch Republic, lies in their political organization. Arrighi (1994) argued that although the Dutch regime of accumulation was based upon the revival of the Venetian strategy of state-monopoly capital, the scale and complexity of the ‘containers of power’ was at the heart of any understanding of historical capital.

While Venice acted as the quintessential city-state, a republican system who’s central purpose was to the city of Venice and other cities, towns, and lands which formed the overall Venetian Empire were kept in stewardship and politically subservient. This meant that state power was solely kept within the city itself (Lane, 1973, 1979).

By contrast, the city of Amsterdam was not a political entity in and of itself; it was not even the political capital of its own state. The ‘containers of power’ had shifted away from the relatively limited political organization of the city state to a more complex and geographically diverse governmental organization approaching the makings of a nation-state. Schmal notes, “The high independence of the seven ‘gewesten’ of the Republic of the Seven United Provinces resulted in a weak ‘nation’ in which there was no place for a ‘national’ urban system” (Schmal, 1988; pp. 299).

Thus, Amsterdam was not a city-state in the true sense of the word but what Ormrod termed a “durable federation of city-states” (Ormrod, 2003; pp.9). Each urban center within the Dutch Republic maintained a high degree of autonomy in its laws, actions, and
political structures. This autonomy was ensconced even within the first article of the Union of Utrecht;

“…each province and the individual cities, members, inhabitants thereof shall each retain undiminished its special and particular privileges, franchises, exemptions, rights, statutes, laudable and long-practiced customs, usages and all its rights, and each shall not only do the others no damage, harm, or vexation, but shall help to maintain, strengthen, confirm and indeed protect the other in these by all proper and possible means…” (quoted in Prak, 2000; pp. 345).

With a decentralized power structure and representative government from each of its provinces, the United Provinces was larger in size, scope, and complexity than its Venetian counterpart had ever considered politically; a situation which provided a substantially larger economic and demographic basis from which to operate. (De Vries, 1997; Diederiks, 1990).

Thus, while Antwerp and Naples had existed outside the state boundaries of the Genoese city-state and were subject to the protection and subjugation of the Spanish imperial state, the Dutch Republic was able to achieve dynamic urban development within its own territorial boundaries with the internalization of protection costs (Arrighi, 1994).

“During the 1590s the new Dutch Republic grew in military strength and political confidence until in 1596 it
signed the Triple Alliance with England and France, which thereby recognized it as a worthy ally against Spain. Now that Amsterdam was secure, many who had still found it unsafe to settle there in the early 1590’s were ready to do so at last” (Lesger, 2001; pp. 74).

Although only a loose federation of territories, the increased scale and complexity of governmental organization allowed the quasi-nation state of the Republic to internalize the urban development of Amsterdam and utilize the competition for mobile capital to redevelop a new built environment for the seventeenth century.

The incorporation of facets of the Italian city-states ability for the expansion of capital ensured a political organization capable of disrupting the traditional boundaries of urban and rural as well as internalize the costs of protection that was far beyond the capabilities of either the Genoese or Venetian Republics in their day. Combined with the increasing complexity of the world-economy and increasing competition for economic opportunities which reduced the profitability, the Dutch regime of accumulation was able to overcome the limits of capital expansion reached under the previous regime and ensure the continued expansion of capital itself.

Tabak remarks that, “…as Amsterdam started to set the world-economic tempo from the seventeenth century, the economic geography of the Mediterranean was transformed accordingly” (Tabak, 2008; pp. 180). This was no less true of the economic and demographic geography of the world-economy as a whole. The heterarchic power distribution that had characterized Dutch urbanism well before the rise of Amsterdam
was now an active and pervasive component in the intensification of the world-economy throughout the seventeenth and eighteenth centuries.

By both direct involvement and indirect repercussions, the Dutch state set off a reorganization of the urban distribution; the proliferation of cities along new trade routes, which exploited the new orientation of the world-economy to the north, and the increasing ruralization of manufacturing in previously isolated regions, tapping into the cheap labor which was capable of lowering production costs and alleviating, temporarily, the pressures of increased competition for the expansion of capital. The built environment was utterly transformed as industrialization in the cities was abandoned in favor of the rural countryside and new commercial and state capitals were erected to both direct the flows of goods and capital but, more importantly, to claim a stake in the new found wealth.

New fairs and commercial centers emerged throughout Europe in far flung centers such as Vienna, Buda, Pressburg, Leipzig, Lwow, Lublin, Sandomir, Gdansk, and many others. “The development of overland trade and the formation of an expansive trade network expanded the compass of the verlag system, which furthered possibilities of rural manufacturing in far-flung parts…” (Tabak, 2008; 181). The old trade routes centered upon the Italian city-states and the imperial domains of the Iberian and Ottoman powers did not cease. Instead they became part of numerous alternative options and one group among many in the competition for capital and economic expansion.

The new built environment, based upon the decentralized urban form of the Dutch Republic and centered upon the economic position of Amsterdam would facilitate the
‘pendulum swing’ of the world-economy back to an intensive organizational strategy. The consolidation of the world-economy would open the floodgates of new urban centers whose built environment was organized around the incorporation of new lands and labor for the expansion of capital.

Thus, although Amsterdam never developed to demographically dominate the urban distribution of the world-economy under the Dutch regime of accumulation, it emerges as one of the largest cities in the distribution by the seventeenth century; an achievement the capital of the Spanish Empire or the city-state of Genoa was never capable of achieving. Under the increasing scale and complexity of the Dutch Republic, the urban distribution is now being determined by both the urbanization of the ‘home’ territory, a ‘national distribution’, and the external domination and influence on the urban centers of the world-economy; a spatial reorientation which comes to the fore with the rise of London.

The spatial reorganization of the world-economy under the Dutch Republic was achieved through two intertwined organizational strategies. First, the decentralization of manufactures outside the major urban centers; a development of the built environment which mirrored the urbanization in the Republic itself with the organization of cities and towns around Amsterdam. This organizational strategy allowed the intensification of the world-economy by incorporating previously marginal regions and population centers into production and consumption which ensured a renewal of profits and the continued expansion of historical capital.

The second strategy involved the revival of the Venetian state-monopoly capitalism of the fourteenth century whereby the Dutch were able to establish outright control over the
spice trade in the Indian Ocean and reorient the lucrative trading routes away from the Mediterranean and through its own entrepôt of Amsterdam.

“…[T]he Dutch capitalist class concentrated on the Indian Ocean rather than the Atlantic as the most likely arena to replicate their Baltic fortunes. As we know, the gamble paid off handsomely. The extraordinary and early success with which the Dutch moved to reorganize the Indian Ocean trading system, in order to seize and enforce their control over the supply of fine spices, centralized in Amsterdam a traffic which in the sixteenth century was still being disputed by several entrepôts: Antwerp, Venice, Lisbon, and Seville… The enlarged reproduction of Dutch capitalism was thus based on the vitality of Asian markets. But it was also based on the one-sided determination with which the Dutch capitalist class through the VOC used that vitality to maneuver Asian markets to its own advantage” (Arrighi, 1994; pp.201-202).

Thus, the collapse of the Portuguese interests in the spice trades with India was not brought about by confrontation with the Persian Empire but by competition from the European companies of the VOC and EIC. The revival of state monopoly capitalism by the Dutch Republic was able to undercut the trade and ultimately the profits and development of the imperial empires themselves. Thus, the Iberian urban centers collapsed and the Ottoman cities, the Sublime Porte itself, stagnated and declined as the
profits from the built environment were reduced or eliminated with the changing dynamic of historical capital.

“The Companies were much more dangerous than any enemy within the system itself could be because they diverted the stream of goods that formed the basis of the redistributive institutions. The Ottoman Empire was shaken, but was nevertheless able to regain its balance; the income from transit trade was despite everything only of regional or personal importance. Estado da India, whose entire political and economic position was based on the protection – or exploitation – of the intercontinental and Asian trade, collapsed” (Steensgaard, 1973; pp. 209).

The combination of the two processes signaled a period of unparalleled urban development throughout the world-economy as new urban centers emerged, facilitated by even greater flows of capital, to challenge the stagnating built environments of the old imperial regimes. By 1750 Amsterdam, London, Vienna, Moscow and numerous other urban centers have emerged with populations equal to only the very largest of cities in the previous century and other urban centers such as Paris and Lisbon⁷ have been revitalized to reach their former heights. More importantly, these numerous urban centers have not achieved new heights of demographic expansion but instead created a heterarchical urban

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⁷ It is interesting to note that Lisbon’s resurgence in the urban distribution was less the result of Dutch influence, after its status as an entrepôt of world trade was undercut by the Dutch monopolization of the spice trade, and more the influence and support of the rising British state under the Anglo-Portuguese alliance “...which would in due course transform Portugal and its empire into a de facto British protectorate” (Arrighi, 1994; pp. 198).
distribution of counterpoised power throughout the world-economy capable of intensifying the processes of production, circulation and consumption.
Section 3.3:

The Imperial City and the Nation State

A warning to London by the fall of Antwerp

Let Antwerp warning be,
thou stately London to beware:
Lest resting in thy glee,
thou wrapst thy self in wretched care
Be vigilant, sleepe not in sin:
Lest that thy foe doo enter in.
Keep sure thy trench, prepare thy shot:
Watch wel, so shall no foil be got.
Stand fast, play thy parte:
Quail not but shew an english hart,
Dout, dread, stil fear:
For Antwerps plague approcheth neer.
(Ralph Norris; circ. 1577)

When Ralph Norris penned his warning to London, undoubtedly in response to the Spanish Fury of 1576, he entered into a comparison of two cities that were of great importance to the structural conditions of the world economy and the extensive regimes of accumulation. Antwerp a major entrepôts of the previous, extensive, Genoese-Iberian regime which ‘discovered’ the world and London, an entrepôts of the new extensive British regime which ‘conquered’ the world. However, it is a comparison which also harbors stark differences; In the centrality of the urban demographic development of the state, the industrialization activities of the urban centers, and the expanding role of governmental organization to facilitate capital expansion.

Antwerp, like Naples in the Mediterranean, was a city whose economic position in the world-economy was seemingly disarticulated from its local demographic make-up but in reality was an integrated element of the world-economy due to its subordination to the imperial power of the Spanish crown and the cosmopolitan wealth of the Genoese
merchants. Thus, as we saw in Naples, the city of Antwerp was a vessel for the accumulation of capital and the expansion of the world-economy. What Naples was for the expansion of imperial and economic opportunities in the Mediterranean, Antwerp was for the expansion of opportunities and capital accumulation in the North Atlantic. This meant that while Antwerp was the world’s entrepôts in the fifteenth and sixteenth centuries, its impact on the urban distribution of the world-economy was entirely indirect and ultimately undermined by its subordinate position to cosmopolitan capital and imperial power.

Although an external vessel for the capital accumulation of the Genoese city-state, the built environment of Antwerp never developed the demographic weight of its sister city of Naples in the sixteenth century⁸ and, like Naples, was ultimately left without the institutional protections and governmental support Amsterdam would have through the Dutch Republic a century later; through the internalization of protection costs for its own self defense. Thus, when the Low Countries began their revolt against Spanish rule, Antwerp found itself with no support or protection.

“Although it is not absolutely clear if the period around 1570 was the demographic peak of the sixteenth century, it is nevertheless the last moment that we can see the effects of the demographic growth the area had witnessed

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⁸ De Vries estimates the population of Antwerp in 1550 to be approximately 90k inhabitants. While Chandler’s interpolated population estimate would place it closer to 80k inhabitants; an estimated population similar to the maximum population attributed to Antwerp by Thijs (1988) at the city’s height in the sixteenth century. This places Antwerp at the bottom of our urban distribution for the world-economy with a population of about 20k more than Seville, the economic center within the Spanish home territory itself. In either case, all indications are that by 1600 Antwerp has collapsed with approximately 47k-49k inhabitants (de Vries (1985), Chandler (1987), Thijs (1988)).
throughout the preceding decades...If there had been a period of demographic growth in the Antwerp area between the late fifteenth century and ca. 1570, it definitely came to an end with the beginning of the Eighty Years’ War in the 1570’s” (Limberger, 2008; pp. 70).

Following, and at points forcibly evicting Antwerp, from its position as a world entrepôts in the seventeenth century, Amsterdam’s growing urban population made it one of the largest cities of the world-economy for a time. As discussed previously, the rise of the nascent nation-state of the Dutch Republic, created the economic, political, and social conditions necessary to influence the urban distribution of the world-economy both indirectly, through deindustrialization and external influence on competing urban forms, and directly, through the development of a built environment whose population became the most urbanized in the world-economy of the seventeenth century with one out of every three people in the Dutch state living in a city.

At the other end of the spectrum, London and Britain stand in stark relief to the urban development of either Antwerp or Amsterdam and the Netherlands. As we can see in Table 3.1, while Amsterdam was clearly the largest and most dominant city in the Netherlands throughout the seventeenth and eighteenth centuries it never accounted for more than 1/3 of the total urban population of the state until 1750; the point at which the signal crisis of Dutch hegemony begins. Throughout a period of 150 years, the emergence of Dutch hegemony is characterized by a decentralized urban formation. However, London and the British state show a distinctly different urban hierarchy
distribution which is both less urbanized, as a percentage of the total population, and
clearly dominated by one urban center, the city of London.

Table 3.1: English and Dutch Urban Distribution, 1600-1750

<table>
<thead>
<tr>
<th></th>
<th>1600</th>
<th>1650</th>
<th>1700</th>
<th>1750</th>
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<tbody>
<tr>
<td><strong>Number of towns of 10,000+</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>England and Wales</td>
<td>6</td>
<td>8</td>
<td>11</td>
<td>21</td>
</tr>
<tr>
<td>United Provinces</td>
<td>19</td>
<td>19</td>
<td>20</td>
<td>18</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Population Living in Towns of 10,000+</strong></th>
<th>Thousands</th>
<th>% of Total</th>
<th>Thousands</th>
<th>% of Total</th>
<th>Thousands</th>
<th>% of Total</th>
<th>Thousands</th>
<th>% of Total</th>
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</thead>
<tbody>
<tr>
<td><strong>England and Wales</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>excluding London</td>
<td>55</td>
<td>1.3</td>
<td>95</td>
<td>1.8</td>
<td>143</td>
<td>2.8</td>
<td>346</td>
<td>6.0</td>
</tr>
<tr>
<td>London</td>
<td>200</td>
<td>4.9</td>
<td>400</td>
<td>7.6</td>
<td>575</td>
<td>11.5</td>
<td>675</td>
<td>11.7</td>
</tr>
<tr>
<td>Total</td>
<td>255</td>
<td>6.2</td>
<td>495</td>
<td>9.5</td>
<td>718</td>
<td>14.2</td>
<td>1021</td>
<td>17.7</td>
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<tr>
<td><strong>United Provinces</strong></td>
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<td></td>
<td></td>
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<tr>
<td>excluding Amsterdam</td>
<td>299</td>
<td>19.9</td>
<td>428</td>
<td>22.9</td>
<td>439</td>
<td>23.1</td>
<td>370</td>
<td>19.5</td>
</tr>
<tr>
<td>Amsterdam</td>
<td>65</td>
<td>4.3</td>
<td>175</td>
<td>9.4</td>
<td>200</td>
<td>10.5</td>
<td>210</td>
<td>11.1</td>
</tr>
<tr>
<td>Total</td>
<td>364</td>
<td>24.3</td>
<td>603</td>
<td>32.3</td>
<td>639</td>
<td>33.6</td>
<td>580</td>
<td>30.5</td>
</tr>
</tbody>
</table>

Source: David Omriod, The Rise of Commercial Empire, p. 11

During the seventeenth century, Britain has fewer than half the number of major cities with populations over 10,000 than that of the Netherlands. It is not until the Dutch signal crisis of the eighteenth century that the number of major cities in Britain exceeds those in the Netherlands, 21 to 18. Even during this period of two centuries where the number of major cities in Britain is steadily increasing the central dominance of London in the British urban hierarchy is blatant. London routinely has approximately four times the population itself than all the other cities in Britain combined until the peak of the global heterarchical distribution in 1750 when London still accounts for nearly 2/3 of the urban population in Britain.

The decentralized metropolis, heterarchical urban distribution, of the Netherlands is clearly evident throughout the 200 year period in Table 3.1 and while London never loses
its ‘primate city’ status during this period, its overall place in the urban hierarchy of England is steadily eroded. London was always a ‘primate city’ but its urban distribution flattens considerably during the period of Dutch hegemony.

However, while the centrality of urban development in the British distribution stands in contrast to that of the Dutch Republic; it is the intertwined role of industrial activities and state development which are ultimately crystallized in the built environment of London and facilitate the transformation of the urban world-economy from a heterarchical, counterpoised urban distribution in the eighteenth century to a hierarchical distribution in the nineteenth. The emergence of new and revitalized urban forms to meet the challenges of Dutch influence begins to remake the British city both at the national and international scale with the development of a distinct national hierarchy and the revitalization of imperial urban development as the Genoese-Iberian regime had accomplished two centuries prior.

The process of the industrial revolution, beginning in either 1760 (Ashton, 1964) or 1780 (Hobsbawm, 1964), is widely perceived in the literature to be the take off of unprecedented urban expansion throughout Europe and subsequently the entire world. However, the urbanization of London and Britain were the result of specific conditions of time and space in the development of the global economy. The development of a nation-state capable of fulfilling the institutional needs and capacities of capital formation to break the limits reached under Dutch hegemony in the previous century. As de Vries noted when discussing Britain:
“It is difficult to resist linking this unique British urbanization process to her equally unique Industrial Revolution, and interpreting it as the opening salvo of the universal urbanization that has spread over the western world since the mid-nineteenth century… Yet the preceding analysis of urbanization, based upon the potential concept rather than on comparisons of ‘national’ histories, gives us reason to suspect that this interpretation of Britain’s unique urban history is excessively anglo-centric and presentist” (de Vries, 1984; pp. 168).

The historical conditions of capital and the expansion of the world-economy through the British Empire were one aspect of the specificity of time and space in the development of a new urban world. The increasing size of containers of power, the full rise and development of the nation-state, provided the additional intuitional and developmental conditions necessary to create a hierarchical urban distribution in which the Metropolis of Britannia, London, stood as the face of modernity and the gateway to economic success in the world-economy. However, as this analysis demonstrates, the historical conditions of hierarchical urban growth in the world-economy are not unique to the development of Britain and the Industrial Revolution.

In fact, when we consider the urbanization of Britain during its rise to the fore of the world-economy and the rise of its manufacturing centers of the Industrial Revolution we see two very different and dynamic patterns of urban development under British hegemony. First, the rise of urban centers outside its home territory, with the direct
subordination of new imperial territory in British India and the stagnation and decline of urban rivals through economic and imperial coercion. This process bears resemblance to the urbanization of the previous extensive hegemon, the Genoese-Iberian regime, two centuries prior, where the imperialism of the Spanish Empire and the mobile cosmopolitan capital of the Genoese redeveloped the urban distribution of the world-economy through cities such as Naples and Antwerp. The British Empire entered into its own process of urban redevelopment through the imperialism of its colonial empire and the cosmopolitan capital of its trading companies for the redevelopment or establishment of cities in North America and India; the deliberate and pervasive extension of the economic structure of the British built environment and the revival of an urban formation for imperial dominion and capital accumulation.

Second, was the redevelopment of urban centers within its national territory, the nation-state, through the onset of the Industrial Revolution. The rise and emergence of Amsterdam, in 1650, marked the first instance of the internal organization of the hegemonic power directly entering into the urban distribution of the world-economy. Something which was never achieved by the governmental organization of the Genoese-Iberian as neither Genoa, Seville, or Madrid ever achieved significant demographic growth to become one of the largest urban centers of the world-economy.

Therefore, externally, the imperial-cosmopolitan, extensive empire of the British crown ‘conquers’ the world by directly incorporating some of the largest cities in the world economy within its empire. Further, the emergence of Bombay, Madras, and Calcutta along with the domination of Hyderabad and Delhi, creates a series of external urban
formations which stand at the nexus of imperial power and cosmopolitan capital as had Naples three hundred years prior.

Internally, the rise of manufacturing and trade centers within the British state itself, most notably London as the largest city in the urban distribution but further, the development and urban explosion of Manchester, Liverpool, Glasgow, and Birmingham, means five major urban centers in the world-economy are centered within the territory of the British state itself. This means that for the first time in the historical development of capital accumulation, the hegemonic power of Britain contains the some of the largest cities within urban distribution of the world-economy in both its national and imperial territory.
Chapter 4:

Urban Hierarchy in Macro Perspective

In this chapter we will examine the changing patterns throughout the long nineteenth century of the British systemic cycle of accumulation to indentify the unprecedented level of urbanization and the uneven nature of its spatial organization. Finally, we will consider the limits to a new urban hierarchy of British capitalism and the rise of competing demographic rivals at the dawn of the twentieth century.

The rise of London and its associated regime of accumulation in the British Empire is clearly demonstrated in Figure 4.1. Once London achieves its demographic dominance in 1750, over the declining imperial center of Istanbul, it remains the largest urban city in the distribution of the world-economy for a century and a half. With the signal crisis of Dutch hegemony in the eighteenth century, the urban distribution of the world-economy proceeds to shift decisively towards a hierarchical distribution of power based upon the form and function of British urbanism. “…[T]he Phoenix that rose from the ashes of the Dutch crisis of 1780-83 was London as the new governing center of world finance” (Arrighi, 1994; pp.159).
When we examine the individual points in time and their correspondence to the larger pattern observed in Figure 4.1 we begin to articulate how the spatial dimensions of urban development begin to shift in response to the rise and overwhelming influence of London and the British imperial state.

In 1750, at the peak of the heterarchical distribution of Dutch hegemony, London first emerges as the largest city of the urban distribution with the general decline of Istanbul. The city itself had already undergone a massive redevelopment and expansion of its built environment in the previous 50 years. The population of the city had expanded over 200%, from approximately 187,000 inhabitants in the sixteenth century, when
Amsterdam and the Dutch Republic replaced Genoa and the Spanish Empire as the center of the world-economy, to 676,000 inhabitants in 1750.

**Figure 4.2: Heterarchical Urban Distribution in 1750**

![Urban Distribution Graph](image)

Ironically, London does not become the largest city in the distribution because it has attained new dimensions of demographic growth outstripping its urban rivals; rather it was the result of demographic decline, as Istanbul was marginalized throughout the reign of Dutch hegemony and ultimately bypassed by the rise of the British state which once and for all reoriented the world-economy away from the Mediterranean and towards the Atlantic. Thus, it is Istanbul’s demographic decline from 700,000 inhabitants in the previous century to only 625,000 inhabitants by 1750 which creates the conditions in the urban distribution for London to emerge as the largest city in the world-economy.

Istanbul was not the only urban center to see its demographic fortunes change at this time. The rise of British hegemony and the urban dominance of London is intertwined
with the general demographic stagnation of her closest political, economic, and urban rivals in Paris and Amsterdam. A century earlier, Paris had been larger than London and the second largest city in the world-economy behind Istanbul. By the eighteenth century this position had changed as the population of Paris stagnated, the city only added some 50,000 inhabitants over the eighteenth and early nineteenth century, and its relative demographic position in the urban distribution would decline to become only the sixth largest urban center in the world-economy.

Amsterdam, the economic heart of the world-economy in the seventeenth century would also see a significant change in its demographic fortunes; a parallel to the change in the economic and political fortunes of the Dutch Republic itself at the beginning of the seventeenth century. The great urban center of trade and commerce of the previous century, Amsterdam achieved almost no growth in the first half of the eighteenth century, adding only 9,000 new inhabitants to its population in 50 years, before declining throughout the rest of the century to 200,000 inhabitants; its smallest population since the seventeenth century.

The distribution in 1750 was the most heterarchical point in the development of urban power with a ratio of only 4.3 between the largest city, London, and the fifteenth largest city, Rome. This should not be a surprise as the largest city’s population is less than that of the largest city in the previous century, and a general period of urban demographic stagnation was prevalent throughout the largest cities of the world-economy. However, the point of maximum heterarchical urban distribution of power would be brief as a substantial urban demographic change was occurring.
By 1800, the urban distribution of the world-economy was undergoing a dynamic period of reorganization as London was becoming the great Metropolis of the era and achieving a demographic expansion not seen in a European city for centuries. During the eighteenth century the population of London nearly doubled to reach an estimated 1.1 million inhabitants by the end of the century. The logarithmic fitted lines of Figures 4.2 and 4.3 show the dramatic change in the urban distribution at the end of the eighteenth century with the fitted line conforming to a much steeper slope and an extremely high $R^2$ of .96.

Additionally, with the extension of the world-economy by the British regime of accumulation, cities in East Asia are now added to the distribution and the overall numerical size of the distribution is expanded from 15 cities in 1750 to 25 cities in 1800. This spatial change in the geographic dimensions of the world-economy creates two different considerations for its effect on the urban distribution. One, is the addition of cities in East Asia actually mitigates the effects of the urban demographic disparity which
emerged between London and other cities which had been part of the distribution in the eighteenth century. Peking (Beijing), Kwangchow (Canton), and Edo (Tokyo), now become part of the urban world-economy of historical capital and each of these cities maintained populations in excess of 600,000 inhabitants. Thus, the addition of cities in East Asia, whose populations are larger than the second largest city in Europe, Paris, ensures the urban distribution of the world-economy of British capital in 1800 was more heterarchical than that which would have been manifest if only European and South Asian cities had been considered. The demographic weight of East Asian cities is not surprising since many urban centers had historically maintained larger populations than their western counterparts (Satterthwaite, 2002).

Second, the addition of 10 urban centers to the calculated urban distribution ratio has the potential effect of magnifying the hierarchy ratio which the world-economy and British regime of accumulation had begun to develop. Since additional urban centers would be smaller in population than the comparable number of cities in 1750, meaning that the 25th largest city must by definition be smaller than the 15th largest city, both measurements should be considered.

If we only considered the 15 largest cities in the world-economy of 1800, the urban ratio would be 4.8. Although a much smaller ratio than the 6.3 we saw in Figures 4.1 and Figure 1.4, this is still larger than the 4.6 ratio of urban heterarchy found in 1750 at the signal crisis of Dutch hegemony. Thus, although the transition towards urban hierarchy

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9 The population of Paris in 1800 was approximately 550k to 580k inhabitants. Chandler (1987) and Bairoch (1988) both place the population of Paris at approximately 550k while de Vries (1984) estimated the population to be 581k; a population which still had 100k fewer inhabitants than the city of Edo, Japan at that time.
would not be as crystalline in this measure, it would still remain even when a smaller number of urban centers are considered.\textsuperscript{10}

**Figure 4.4: Hierarchy in 1800 with 15 Cities**

![Hierarchy in 1800 with 15 Cities](image)

Further, a smaller number of urban centers (15 instead of 25) considered in the distribution would not offset the geographic spatial expansion of the world-economy with the inclusion of East Asian cities. Thus, to completely compare the urban distribution of the world-economy in 1750 to 1800 we should exclude the cities of East Asia and compare the 15 largest cities of the previous spatial scale of the world-economy. If we do this, we find the ratio of the urban distribution to measure a more distinct hierarchical relationship at 6.3; a value identical to that which was found with the 25 city value. This is due to the presence of Hyderabad of India and Amarapura of Burma in the 15 and 25 city distributions respectively, since both cities are estimated to have approximately the

\textsuperscript{10}Ironically, a 15 city urban distribution in 1800 achieves a nearly perfect fit with a logarithmic regression line with a coefficient of determination of .98 indicating a near perfect log-linear association and a true Zipf’s curve.
same urban population of 175k inhabitants. Thus, the 25 city measure of the urban
distribution, using the expanded spatial dimensions of the world-economy, and the 15
city measure of the urban distribution, using the smaller geographic dimension of the
previous world-economy, is bound by the same demographic measure of 175,000
inhabitants to the 1.1 million inhabitants of London.

However, without the urban centers in East Asia, the geographically reduced 15 city
measure of urban distribution in 1800 has an extreme hierarchical slope with London
more than twice as large as it’s nearest urban rivals of Istanbul and Paris. The coefficient
of determination for the logarithmic slope is reduced to a still significant .87; a value
which actually conforms closer to the fitted slopes of the later nineteenth century below.

By 1850 London has again more than doubled its urban population to reach an estimated
2.4 million inhabitants. It is twice as large as its nearest European rival, Paris, and nearly
1/3 as large again as its nearest demographic rival of Peking. The hierarchical dimension
of the world-economy is clearly demonstrated in both Figure 3.5 below and Figure 3.1
above with a ratio of 7.9.
Further, due to the increasing demographic distance between London and its urban rivals, the hierarchical character of the distribution means that a logarithmic fitted regression line no longer matches the data as well and thus our measure of fit falls to .88. This measure of fit has been reduced to the same level found in 1750, just one century earlier. However, in 1750 the measure of fit of the logarithmic line was reduced due to the presence of cities with nearly the same population as London and their distribution above the regression line. Whereas in 1850, the logarithmic line is unable to account for the outlier of London itself and thus multiple urban centers appear below the regression line.

Even more important is the emergence of British cities, both within the British nation-state and those which are subjects of the British Empire. These cities now make up a substantial portion of the urban distribution itself; 9 of the cities in 1850 are directly under the state or imperial power of British hegemony. While London defines the peak of the urban distribution at this time, the three cities which form the lower bound of our urban distribution are Madras, Lucknow, and Birmingham, each with approximately
300k inhabitants and are all now direct urban forms of British capital for its own political and economic expansion.

Madras, a city of Southern India, was the direct development of British colonialism from its inception in the seventeenth century as a trading outpost to its emergence in the nineteenth century as a center of imperial administration (Lewandowski, 1975; Mentz, 2005). Lucknow, a city of Northern India, served as a vassal state of the British East India Company in the nineteenth century and would become formally part of the British Empire with its full annexation in 1856 (Fisher, 1997). Birmingham, a city within the British state itself, emerged as both a major industrial and political center; a city which defined both the governmental reorganization of nineteenth century Britain with the Great Reform Act of 1832 and the epitome of urban development under the Industrial Revolution of the period (Hilton, 2006).

Thus, while London stood at the forefront of the urban distribution under the British regime of accumulation, the component cities of its national and imperial urban distribution also stood as supreme examples of the urban form. Through the industrial development of its national urban distribution, the colonization of its imperial holdings, and the subjugation of client states, British urbanization had become pervasive. It is under the urban distribution of the world-economy in the nineteenth century where we observe the full manifestation of the scale and complexity achieved by the extensive regime of British historical capital combining the previous national urban formation of the Dutch Republic and the imperial urban formation of the Genoese-Iberian regimes.
Just 30 years later, in 1880, the urban hierarchy of British historical capital has peaked, with a ratio of 11.9, as London is now nearly twice the size of its nearest demographic rival of Paris, and has added an additional 1.85 million inhabitants. At this point, the hierarchical distribution of power in the urban development in the world-economy has reached such an extent that the logarithmic regression line is unable to account for the steep size differential between London and the rest of the distribution, thus reducing our measure of fit to only .80. London’s 177 percent growth over the 30 years continued to outpace the 171 percent growth of Paris while Peking’s population collapses 54 percent, to less than 1 million inhabitants.

**Figure 4.6: The Metropolis and Urban Hierarchy in 1880**

The two intertwined dynamics of British urban development in 1880 achieve a level of hierarchy in the world-economy well beyond that identified under the Genoese-Iberian extensive regime three centuries prior. First, the lower bound of the urban distribution, the smallest cities, achieves much lower growth rates than the largest city, London. In
1880, the 25th largest city has an urban population only 20 percent larger than its 1850 counterpart. Compared to the 177 percent increase of London, the lower end of the urban distribution continues to fall behind the development and expansion of the great Metropolis. Second, British cities outside of London, both national and imperial, remain the largest portion of the overall distribution itself, 8 of the 25 cities. Thus, the urban world-economy is still dominated by British national and imperial cities. The only British city which falls out of the urban distribution by 1880 is Lucknow, following the Indian Rebellion of 1857 (Fisher, 1997). Thus, direct British influence on the urban world-economy is still pervasive while its indirect influence on the urban world-economy continues on cities such as Peking, Canton, and Cairo.
Section 4.2: Uneven Spatial Development: 1750 to 1880

A further way to compare the development of hierarchical distribution under the auspices of the British regime of accumulation is to consider the growth rates of major urban centers between the signal crises of capital accumulation. Thus, Table 4.1 examines the 32 cities which made up the urban distribution at signal crisis of Dutch hegemony in 1750 and the signal crisis of British hegemony in 1880.\footnote{The 32 cities in Table 4.2 include all 40 cities of 1750 and 1880 which were used in the development of the urban ratio distributions. However, since 8 of the cities were among the largest urban centers at both time points they were not double counted in the analysis.}

This is further broken down into defined categories; cities which were among the largest in both time periods, cities which were dropped from the urban distribution between 1750 and 1880 since they ceased to be among the largest urban centers in the world, and cities which achieved such spectacular growth rates during the period that they emerged to become part of the urban distribution of largest cities in 1880.

This categorization of the urban development patterns under British hegemony allows us to consider some distinct processes in the rise and fall of cities in the world-economy. A pattern which appears to represent specific historical conditions as areas were added to the spatial extension of the world-economy under British imperialism or were becoming

\footnote{Of the 12 cities included in both periods in the table, 8 represent cities which existed in both time periods in the urban distribution for the spatial boundaries of the world-economy under Dutch hegemony. While 3 of the cities (Tokyo, Peking, and Canton) which were among the largest in the world in 1750 but were not part of the spatial dimension of the world-economy of Dutch hegemony but are included since they are part of the spatial dimensions of the world-economy in 1880. And 1 city (Lyon) which was among the largest of the European cities in 1750, although not one of the largest in the world-economy was included since it was one of the largest cities in 1880.}
further marginalized through the geographical reorganization of capital, away from the Mediterranean and Near East.

In the Mediterranean, Istanbul, once the premiere city in the urban distribution of the seventeenth and eighteenth centuries, has essentially stagnated. The city population in 1880 is only 1.4 times as large as the city 130 years prior. If we consider that comparison to the city population at its height in 1700 the demographic weight of the Sublime Porte has remained relatively unchanged for nearly 200 years despite the massive economic and demographic expansion of the world-economy around it.

Other former urban centers of dominance, Lisbon, Amsterdam, Naples, and Rome have all followed the same pattern of relative stagnation throughout the second half of the eighteenth and all of the nineteenth centuries as the opportunities for capital expansion and development have moved further west and are now squarely centered on the British Empire. While the once great city of Mashhad has become a shadow of its former self with only about ¼ of the population in 1880 it had attained in 1750; following both the collapse of the Afsharid Kingdom, the end to imperial expansions in the Near East and South Asia, and the development of a weaker state organizational form in the nineteenth century (Axworthy, 2007).
Table 4.1: Comparison of Urban Expansion Between 1750 and 1880 by Population Ratio

<table>
<thead>
<tr>
<th>Largest Cities in Both Periods</th>
<th>Emerging Cities in 1880</th>
</tr>
</thead>
<tbody>
<tr>
<td>London</td>
<td>Liverpool</td>
</tr>
<tr>
<td>Vienna</td>
<td>Glasgow</td>
</tr>
<tr>
<td>Moscow</td>
<td>Manchester</td>
</tr>
<tr>
<td>Paris</td>
<td>Birmingham</td>
</tr>
<tr>
<td>Madrid</td>
<td>St. Petersburg</td>
</tr>
<tr>
<td>Lyon**</td>
<td>Bombay</td>
</tr>
<tr>
<td>Cairo*</td>
<td>Berlin</td>
</tr>
<tr>
<td>Canton*</td>
<td>Madras</td>
</tr>
<tr>
<td>Naples</td>
<td>Calcutta</td>
</tr>
<tr>
<td>Istanbul</td>
<td>New York^</td>
</tr>
<tr>
<td>Tokyo*</td>
<td>Philadelphia^</td>
</tr>
<tr>
<td>Peking*</td>
<td>Boston^</td>
</tr>
<tr>
<td></td>
<td>Chicago^</td>
</tr>
</tbody>
</table>

** Former Largest Urban Centers in 1750 **

<table>
<thead>
<tr>
<th>City</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hyderabad</td>
<td>2.00</td>
</tr>
<tr>
<td>Amsterdam</td>
<td>1.32</td>
</tr>
<tr>
<td>Lisbon</td>
<td>1.14</td>
</tr>
<tr>
<td>Rome</td>
<td>1.03</td>
</tr>
<tr>
<td>Delhi</td>
<td>1.00</td>
</tr>
<tr>
<td>Mashhad</td>
<td>0.25</td>
</tr>
<tr>
<td>Murshidabad</td>
<td>0.25</td>
</tr>
</tbody>
</table>

* Largest Cities in 1750 but not within the spatially defined limits of the world-economy

** One of the 40 largest urban centers in Europe in 1750 although not used in the 1750 dataset

^Population ratios for US cities not calculated given their incredibly small populations in 1750 prior to the emergence of the United States nation state and the onset of rampant immigration.
Cities which were integrated into the world-economy of British capital were themselves caught in a period of relative demographic stagnation or decline, as the expanding world-economy reoriented the economic, political, and social conditions upon which the cities had developed. Thus, cities such as Canton, Tokyo, and Peking were added to the urban distribution of the world-economy in the nineteenth century but remained relatively unchanged demographically. The addition of East Asia to the world-economy of the British and western capital was rather chaotic and piecemeal throughout two Opium Wars and the opening up of Chinese ports through direct military and political coercion.

“By the early 1840s, production of the new capital goods for the domestic market began yielding rapidly diminishing returns. But the continued unilateral liberalization of British trade created the conditions for a major boom in world trade and production. British capital goods found a ready demand among governmental and business organizations from all over the world. And these organizations in turn stepped up their production of primary inputs for sale in Britain in order to procure the means necessary to pay for the capital goods or to service the debts incurred in their purchase” (Arrighi, 1994; pp.161).

Ultimately it should therefore be no surprise that 13 of the 32 major urban centers identified in Table 4.1 had growth rates which produced a population ratio of approximately 2 or less. Thus, over 1/3 of all cities in the combined comparison of the two time periods remained relatively unchanged or even declined despite the urban
demographic explosion. The development of urbanization under British capital was neither universal nor random in its process; rampant demographic growth in places like London must be considered in conjunction with the demographic stagnation or loss in places like Istanbul and Mashhad.

Further, as we will explore in Chapter 6, cities of South Asia, specifically the cities of the Mughal Empire which was subsumed to the expansive British crown throughout the period, have highly divergent trajectories based upon their incorporation and exploitation by British capital. Dehli, the capital of the remnants of the Mughal Empire remained demographically stagnant throughout the period while Hyderabad, a wealthy client state of British India, achieved comparatively minor growth as its population only doubled. In contrast, Murshidabad, in Bengal suffered severe demographic decline as the political reorientation of the region to Calcutta by the East India Company served to eliminate both its historical, political, and economic conditions of development.

In contrast, the cities of Bombay, Madras, and Calcutta experienced rampant urban growth throughout the nineteenth century. Each of the cities achieved growth rates that surpassed the growth rate of London itself. Each served as the political and economic focal point of British expansion and control of the subcontinent while being opened to the massive investment and exploitation of their built environment by British and other foreign capital. As centers of British imperial power and capital investment, the nineteenth century cities of British India offer a clear and telling insight into the expansionary process of urban development under British hegemony.
As we will see in Part II, the remaining cities of Table 4.1 which experienced phenomenal growth rates throughout the British hegemony and the formation of an urban hierarchy, fall into clear-cut categories. As either the imperial capitals of ideological and political rivalry to the British Empire itself or as counterpoised economic models of geographic expansion with a distinctly different spatial orientation and organizational system.

The cities of Berlin, Vienna, and, St Petersburg, as the capitals of new imperial endeavors to create cities whose political and social organization would reflect the historical creation of nation-states in Germany, Austria-Hungary, and Russia respectively was one manifestation. Additionally, the continued existence of the Spanish and French Empires ensured that the cities of Madrid and Paris would continue to be redeveloped and extended as the emerging national identities of these states attempted to keep pace with the Britannic Metropolis in the North Atlantic. The scalar expansion of the containers of power of historical capital would be maintained within the built environment of capital cities capable of organizing the increasingly complex functions of the nation state as well as fulfill the ideological needs of fermenting a new political organization within the stone, glass, and metal of a ‘modern’ national city.

While a distinctly different urban spatial development in the construction of a new built environment to both keep pace and surpass the Metropolis of Britannia is most clearly seen in the rise of the United States and the major urban centers of New York, Boston, Chicago, and Philadelphia. Unlike the imperial capitals of Europe, which predominantly stand alone in the urban distribution, we can already see the emerging presence of the U.S. in the nineteenth century. However, the U.S. urban form is not manifested in the
imperial capital of the nascent nation-state but rather manifested in the spatial dispersion of the economic and social conditions of the urban environment throughout the territorial integration to a continental sized economy. This emerging counterpoised urban development of an integrated national urban economy is markedly different to the imperial capitals of a divided Europe.

Finally, those cities which were a direct component of British capital stand in contrast to both the imperial capitals of Europe and the counterpoised power of the United States. The British national cities of Liverpool, Glasgow, Manchester, and Birmingham all emerge as some of the largest cities in the world next to London itself. The reorientation of the world-economy to the British Isle created unprecedented opportunities within the nation-state for the self-expansion of capital within its own borders. A primary locus of this opportunity emerged in the development of the new built environments outside the nexus of the Metropolis itself. By 1880, at the signal crisis of British capital, the urbanization of Britain itself accounts for one fifth of the largest cities in the urban distribution. If we expand this analysis to cities within the British Empire, to include the cities of British India, this expands to nearly one-third of the entire urban distribution; 8 of the 25 cities in the dataset. However, none of these urban centers stands counterpoised to London itself. Rather, the development of an urban environment for production and consumption stands in support of the great Metropolis; components of an urban hierarchy with distinct historical conditions for both land and labor in the expansion of capital itself.

The pendulum swing of urban development has clearly returned to the hierarchical distribution of power through the extensive regime of British imperialism. However, the
expanding containers of power, with the rise of the first true nation-state to hegemony, ensures the urban redevelopment of the latter part of the eighteenth and nineteenth centuries is manifested directly through the political control and oversight of the British crown itself.

In the previous swings of historical capital discussed earlier, the reorientation of the urban distribution by successive hegemonic powers was more a process of indirect influence as opposed to the direct process of urban development itself; i.e. the rise of Istanbul from the revival of the spice trade through Spanish imperial expansion vs. the redevelopment of Naples to facilitate Spanish imperial power and Genoese capital. Both Naples and Istanbul had profound effects on the urban distribution of the historical period and on the ability for historical capital to achieve its own self-expansion but of the two, only Naples was a direct manifestation of the imperial power and cosmopolitan wealth of historical capital. While Istanbul stood at the top of the urban world-economy, its dominance was what would propel the urban hierarchy distribution; an achievement neither Genoa, Antwerp, Naples, or Seville were capable of achieving during this period.

In contrast, as the containers of power have enlarged, the ability of the hegemon to create and control the urban distribution of the world-economy has increased. The British state, as the first imperial nation-state of historical capital itself, defines the urban distribution of the world-economy through more than the development of London but additionally through the direct development of nearly one-third of the urban distribution and through the subjugation of political, economic, and social rivals to its urban world from the eighteenth century. The stagnation of Tokyo and Peking, both cities which had larger populations than London in 1750, as well as Osaka, Canton, Kyoto, and Hangchow
which formed a distinctly different urban distribution for East Asia in 1750, was not random or unintended\textsuperscript{13}. The underdevelopment of London’s former demographic rivals was both directly and indirectly accomplished through the use of imperial power and the reimagining of modernity in the built environment, to achieve a new urban world for production, circulation, and consumption\textsuperscript{14}. An urban world which saw the Metropolis of Britannia standing at the height of a global hierarchical urban distribution whose complexity and scale had reached new heights and whose direct influence on the global urban development was unparalleled.

\textsuperscript{13} It is interesting to note that the national urban distributions of China and Japan showed clearly divergent patterns of urban growth in the period prior to their incorporation into the European world-economy of the eighteenth and nineteenth centuries. While both China and Japan had historically maintained an urban population of 6-7% of their total population; in the seventeenth century with the development of Edo under the Tokugawa shogunate, the urban population of Japan rose above 16% while more than 20% of urban Japanese lived in the capital city of Edo itself (Rozman, 1973). Thus, while China’s urban formation remained historically constant during this period, the Japanese urban development showed a clear turn towards urban concentration prior to its forced inclusion into the world-economy of historical capital.

\textsuperscript{14} Rozman (1973) estimated that in 1800 some 55 to 65 million inhabitants lived in urban areas worldwide and that 25 million lived in China and Japan alone (Rozman, 1973; pp. 301). If we consider this in proportion to the world distribution of major urban centers, we should expect between 10 and 12 of the world’s largest cities to be within the boundaries of these two states, if large scale urban development is not correlated with the control and domination of resources. Instead, only 7 major urban centers exist within China and Japan in 1800 and this rapidly dwindles to only 3 by 1880 when the spatial expansion of the British world-economy of historical capital is completed. The conditions of historical capital under the British regime of accumulation ensured the built environment of Asian urban forms would be devalued, especially in comparison to the ‘modern’ city form whose relationship between land and labor were developed through divergent processes of political, social, and economic organization.
Section 4.3:  

The Rise of the European Metropolis

Spatially, the world-economy of the nineteenth century ensnared the cities of the world and reoriented them towards the accumulation of capital and the modernity of the great Metropolis itself. However, this reorientation of the global was partially overshadowed by the urban development of Europe itself and the new divisions of land and labor during the Industrial Revolution itself.

Thus, the changing demographic distribution within Europe sheds some light on the larger urban distribution of the world-economy; as the competition for mobile capital and competing economic interests was at its crescendo in this region and the urban reorganization was most profound. If we examine Table 4.2 we can see that in 1800, as the hegemony of the British state emerges from the crisis of Dutch capital, the urban distribution of Europe is distributed across three urbanization levels. Smaller urban centers of less than 20,000 inhabitants which accounts for 23% of the urban population\(^{15}\), moderate sized urban formations of between 20,000 and 100,000 inhabitants and contains 44% of the population, and grand cities of more than 100,000 inhabitants which account for 33% of the urban population.

\(^{15}\) It is important to note that de Vries does not consider places under 10k inhabitants to be “urban” in nineteenth century Europe. Thus, while the upper distribution of city population sizes is unlimited, the lower distribution for the smallest cities begins at 10,000.
The European city and its corresponding demographic weight is most concentrated in the 141 moderate sized cities of less than 100k inhabitants in 1800; probably the result of deindustrialization and the urban heterarchy of Dutch hegemony in the previous century. London itself, accounts for nearly 30% of the urban population in the largest city category, with an estimated 1.1 million inhabitants in 1800, while only 3.977 million inhabitants are estimated to live in the 17 largest cities overall. If we add the population of the cities of Paris and Naples, the second and third largest European cities at the time, these three cities alone account for more than 50% of the urban population of the largest category in 1800. A total of approximately 2.1 million inhabitants resided within the three urban centers out of the 3.977 million estimated to reside in the 17 cities with populations over 100,000 at that time.
Over the next 50 years the number of cities in each category more than doubled but their representative proportion of the urban population in Europe does not remain constant. Instead, the largest 43 cities in Europe and the 284 moderate sized cities now contain approximately equivalent proportions of the total European urban population; at 38% and 37% respectively. While the smallest urban centers, with fewer than 20,000 inhabitants, increased to include 551 cities and account for 25% of the urban population. Thus, the urban population distribution in Europe began to dramatically shift in favor of the largest cities. The three largest cities of Europe in 1800, London, Paris, and Naples now account for only 37.5% of the urban population in cities of over 100,000 inhabitants despite the populations of London and Paris more than doubling over the 50 years\textsuperscript{16}.

Finally, in 1890, with the nineteenth century coming to a close and the signal crisis of British hegemony underway, the rise of major urban centers within Europe itself reaches new demographic heights. Despite the number of cities in each category again doubling in just 40 years, the lower categories of cities see a substantial reduction in their overall demographic weight within Europe.

As we saw in Chapter 3, under the Dutch regime, the urban centers of Europe had suffered demographic stagnation and decline as a long period of deindustrialization was kicked off in the pursuit of cheaper labor outside the cities. Under the leadership and example of the British regime and its associated shift of mobile capital to the commercial and productive functions of the built environment, the great cities of Europe were remade

\textsuperscript{16} The population of Naples had stagnated and slightly declined over this period from an estimated 430k inhabitants and the third largest city in Europe in 1800 to 413k inhabitants and only the 7\textsuperscript{th} largest city in Europe. A similar pattern also befalls Amsterdam which although shows a slight demographic increase, from 195k to 220k inhabitants over the period, falls from the 8\textsuperscript{th} largest city in Europe to the 14\textsuperscript{th} largest by 1850.
to facilitate the Industrial Revolution and a new spatial organization between land and
labor. 46% of the urban population of Europe now resided in large cities of more than
100,000 inhabitants while the great Metropolis itself, still far and above the pinnacle in
the world distribution, fell from accounting for 30% of population of the largest cities in
1800 to less than 14% by 1890. The signal crisis of British hegemony has been reached
and the rising urban centers of the world were challenging the demographic supremacy of
London itself.

We can further observe this changing urban demographic by comparing the fortunes of
the two largest economies of Britain and France. As we can see in Table 4.3, the share of
the urban population in Britain by the largest 10% of the cities achieves significant
growth from 1801 to 1861. With an overall rate of 1.1 for urban growth in that period, the
percentage of the British urban population in the largest cities increased from 61.63% to
68.02%. This even ignores the dynamic growth of Britain’s largest urban centers in the
previous century when London alone demographically exploded from an estimated
675,000 inhabitants in 1750 to approximately 1.1 million inhabitants in 1801\(^7\).

\(^7\) While de Vries, Bairoch, Galley, and Chandler all agree on a population of 675k inhabitants for London
in 1750, they significantly disagree on the population of London in 1800. Galley and Bairoch both estimate
the city population to be at or near 1 million while Chandler and de Vries place it at approximately 860k.
Ball and Sunderland (2001) consider the early estimations of London’s population to be based upon the
County of London in the 1801 census with 960k inhabitants but that the metropolitan area of London
(Greater London) was actually 1.1 million (Ball and Sunderland, 2001; pp. 41-44). The estimated
population for the metropolitan area of London has thus been used for 1801 since the population of
Greater London conforms very closely to later estimations of London’s population in the nineteenth
century by all four scholars. This hopefully avoids the spatial differentiation of administrative boundaries
which would have affected the perceived growth rate of London in later decades.
In the following 30 years however, the concentration of urban population in the largest cities stagnates and in two decades, 1861-1870 and 1901-1910, actually reverses with more people moving into smaller urban centers than the largest cities of Britain. Thus the growth rate for the urban populations into the largest urban centers is stable at 1.004 throughout the period from 1871-1911. It is not surprising that the peak of urban concentration in the largest cities occurs just prior to the signal crisis of British hegemony and the subsequent crisis of capital accumulation both in the built environment and in the larger economic conditions of the British regime itself are bound within the growth of London.

Source: Based upon Figure 3.5 in Robson (1973) pp. 67
In contrast, the urbanization of France shows a perceptible difference in pattern and development to that of the British. As we can see in Table 4.4, France follows a similar pattern to that of British urbanism in the first part of the nineteenth century; the steady accumulation of populations in larger urban centers, with Paris alone accounting for nearly 20% of the urban population by 1851. However, in the latter half of the nineteenth century and first decade of the twentieth century, the urban population in the largest cities does not stagnate, as it did in Britain, but instead continues to rapidly expand. Thus, by 1911, over one half of the entire urban population of France is contained within the largest 33 cities in the nation and Paris alone accounts for nearly 29% of the urban population itself; a level of urban concentration which matches the dominance of London in its national urban distribution a century prior.

Table 4.4: French Urban Concentration: 1811-1911

<table>
<thead>
<tr>
<th>City Size Category</th>
<th>1811</th>
<th>1851</th>
<th>1911</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of Cities</td>
<td>Percent of Total</td>
<td>Number of Cities</td>
</tr>
<tr>
<td>Paris</td>
<td>1</td>
<td>15.0</td>
<td>1</td>
</tr>
<tr>
<td>Cities over 50k</td>
<td>6</td>
<td>11.9</td>
<td>10</td>
</tr>
<tr>
<td>20k-50k</td>
<td>24</td>
<td>16.9</td>
<td>31</td>
</tr>
<tr>
<td>10k-20k</td>
<td>48</td>
<td>16.0</td>
<td>66</td>
</tr>
<tr>
<td>5k-10k</td>
<td>143</td>
<td>23.4</td>
<td>155</td>
</tr>
<tr>
<td>3k-5k</td>
<td>187</td>
<td>16.7</td>
<td>304</td>
</tr>
<tr>
<td>Total Urban</td>
<td>409</td>
<td>99.9</td>
<td>567</td>
</tr>
</tbody>
</table>

*Does not include Paris

Source: Based upon Figure 7.1 in Hohenberg and Lees (1985) pp. 222
If we compare the rates of Britain and France the differences in urban development become particularly clear. As Table 4.5 shows, in the first half of the nineteenth century, Britain’s urban population was already predominantly concentrated in the largest cities with 62% of its urban population. Whereas France’s largest urban centers held just under half of its urban population at 47.1%. Over the 40 years between 1811 and 1851, the majority of France’s urban population becomes concentrated in the largest cities with a 7% increase in the urban concentration. Britain continues to concentrate its urban population into the largest cities as well, from 62.0% to 68.2%, and with a slightly smaller but still impressive 4.9% increase in concentration. This provides us with relatively similar growth rates of 1.1 to 1.2 between Britain and France\(^\text{18}\).

Throughout the following 60 year period, from 1851-1911, the concentration of urban populations proceeds along very different trajectories. Britain’s urban population distribution remains relatively unchanged as only 1.3% more people live in the largest cities in 1911 than had in 1851. As noted above in Figure 4.3, if we examine the breakdown within this time period we see that the flow of the British population into the largest cities peaked in the final decades of the nineteenth century. In contrast, the French population continues to rapidly concentrate into the largest cities with a staggering 22.3% increase and a growth rate of 1.4.

\(^{18}\) As mentioned previously, the comparison of growth in Britain during the nineteenth century discounts the rapid urbanization and development of British cities in the previous century as the estimated urban population in 1750 was only 17.7% of the total (Ormrod, 2003; pp.11). During the remainder of the eighteenth century it is likely the urban population of Britain may have doubled as many city populations experienced rapid growth; the populations of Glasgow, Manchester, Leeds and Liverpool quadrupled during this time period (Chandler, 1987). Hohenberg and Lees (1985) estimate nearly 30% of the British population is urban by 1800 and the nation-state is estimated to have been urbanized (above 50% living in cities) by 1850 (pp. 219).
Table 4.5: Urbanization and Growth Rates of Britain and France: 1811-911

<table>
<thead>
<tr>
<th>Year</th>
<th>% of Total Urban Population in Largest 10% of Towns</th>
<th>Britain</th>
<th>France</th>
</tr>
</thead>
<tbody>
<tr>
<td>1811</td>
<td>62.0</td>
<td>47.1</td>
<td></td>
</tr>
<tr>
<td>1851</td>
<td>66.9</td>
<td>54.1</td>
<td></td>
</tr>
<tr>
<td>1911</td>
<td>68.2</td>
<td>76.4</td>
<td></td>
</tr>
</tbody>
</table>

1811-1851

<table>
<thead>
<tr>
<th>Percentage Increase</th>
<th>Britain</th>
<th>France</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate of Change*</td>
<td>4.9</td>
<td>7.0</td>
</tr>
<tr>
<td></td>
<td>1.1</td>
<td>1.2</td>
</tr>
</tbody>
</table>

1851-1911

<table>
<thead>
<tr>
<th>Percentage Increase</th>
<th>Britain</th>
<th>France</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate of Change*</td>
<td>1.3</td>
<td>22.3</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td>1.4</td>
</tr>
</tbody>
</table>

* Ratio of Percentage at time t to those at time t-1

Source: British urbanization is based upon Robson (1973). French urbanization is based upon Hohenberg and Lees (1985)

The comparison of British and French urban distributions and their concentration into large urban centers provides a clear comparison of the changing urban distribution of the world-economy throughout the nineteenth and early twentieth century’s. If we recall Figure 4.1, the urban distribution under British hegemony became hierarchical throughout the period from 1750 to 1880. This was driven by the growth of London and the relative stagnation of other cities in the ‘world’ distribution; London increased its size by more than 4 times while the lower end of the distribution only increased by just over 2 times. The hierarchical distribution of the British regime peaked in 1880 and was followed by a reverse towards a more heterarchical distribution in 1900.
The concentration of Britain’s urban population into the largest cities meant that by 1811 the largest cities in Britain already accounted for 62% of the urban population. Whereas, the population of France was much more spatially diverse at this time with only 7 cities of populations over 50,000 and which accounted for approximately ¼ of the urban population. Thus, a clear hierarchical distribution was already developed within Britain by the beginning of the nineteenth century while the urban distribution of France appears to indicate a more heterarchical relationship where less than ½ of the urban population is concentrated into the largest urban centers; possibly a legacy from the urban development’s under the Dutch Republic.

By the middle of the nineteenth century Britain continues to increase the hierarchical relationship of its urban distribution with 2/3 of its urban population concentrated within the largest cities. However, the urban relationship within France has now changed with a clear move towards a hierarchical distribution with more than half its urban population now in its largest cities and increasing faster than Britain itself.

Finally, by 1911, the situation has changed dramatically with France achieving a national urban distribution where 76.4% of the urban population is concentrated within the largest 10% of cities; a 22.3 percentage point increase from 1851. This corresponds to a rate of growth of 1.4 and far outpaced Britain’s stagnant 1.0 rate and 1.3 percentage point increase in the urban population concentration. It is at the end of the nineteenth century where Britain’s political, economic, and social rival for European supremacy most approximates the British urban dynamic with Paris a ‘primate’ city comparable to the Metropolis itself.
However, it is also at this point where we begin to observe the rise of urban centers and distributions which will ultimately challenge British urbanization in the following century, the United States and Germany. While the growth of London and Paris was phenomenal, it pales in comparison to the 294 percent growth of New York, 235 percent growth of Berlin and the 240 percent growth of Vienna over the same period of time. For the first time in the century, several ‘million’ cities have emerged with growth rates greater than that of London itself. Further, while British cities remain dominant in the urban distribution, four US cities have emerged, including two, New York and Philadelphia, which are both larger than the second largest British city after London.

This indicates a possible alternative urban structure forming in the world-economy by 1900 as new urban centers are developed using the newly mobile capital of British finance to catch up and rival the built environment of London and British urbanism itself. By 1900, the populations of the largest cities in the world-economy began a process of rapid change. In 1880 the 24th and 25th largest cities in the distribution, Lyon and Cairo respectively, had approximately 350,000 inhabitants. Just 20 years later the 24th and 25th largest urban centers, the German Ruhr and Rio de Janeiro respectively, had more than doubled that lower population threshold to approximately 750,000 inhabitants.

The urbanization of the world-economy was again undergoing a rapid change in the political, economic, and social organization of the urban distribution as the crisis of British capital devalued the built environment of its own cities and freed new sums of mobile capital to remake and redevelop the built environment of alternative urban centers which began to rapidly close the demographic gap of the great London metropolis. The European metropolis emerged with the formation of ‘million’ cities of Paris, Berlin,
Vienna, St Petersburg, and Moscow; a European city capable of rivaling London in both form and function and whose ability to facilitate the expansion of capital through increased exploitation and valuation was proving a better investment than London itself.
PART II: Dynamics of Urbanization

Chapter 5: Building Capitalism: From City-State to Nation-State

In Part I of the dissertation I established the theoretical model for alternative urban formations in the world economy and demonstrated a striking correlation between the temporal and organizational forms of capital accumulation and urban development.

Here, I will explore the particular dynamics of urban development and reorganization to clearly establish a causal mechanism between the organization of cities and the structure and strategy of capital accumulation. By moving between the global conditions of capital reorganization at the global level and strategies of urbanization at the local level, I endeavor to provide both case-studies of particular urban formations within the built environment of particular cities and a broad analysis of the overall changing form of urbanization at particular periods in history.

As outlined in Chapter 1, urban development within historical capital is embedded in mutually reinforcing historical dynamics – most notably, the increasing scale, complexity, and organization of the world economy and its associated hegemonies, the ‘containers of power’, and the recurrent reorganization of capital using previous historical strategies. To fully understand the movement between the Dutch urban distribution and the role of Amsterdam and British urban development and the role of London in the 18th century we must address these reinforcing dynamics.

Venice, the quintessential Italian city-state, built its market and power as an institution capable of developing and ensuring its “monopoly” of trade through the Mediterranean where its built environment and its political, social, and economic power were identical
to that of the state. Although quite strong, this comparably small state would eventually be unable to compete with its larger territorial rivals either demographically or economically. Its built environment and its state organization were incapable of accommodating the substantive economic shift away from the Mediterranean and ultimately to compete with new opportunities for capital accumulation.

In contrast, Genoa, a much weaker Italian city-state, which had lost the competition with Venice for control of the mercantile trade in the Mediterranean, was able to rearticulate itself as the economic pillar of the Iberian empires. This greatly expanded the scale of the world-economy while divesting the city-state of its explicit spatial organization as a center of power in the built environment; a role which was taken up most explicitly by the rise of Naples in the East and Antwerp in the North. A liaison of power between increasing state authority in territorial empires and increasing capital accumulation by cosmopolitan merchant groups was achieved by breaking the connection between political and economic power in the built environment and its associated urbanization. The Genoese ‘cosmopolitan’ state operated throughout the world economy and bought its protection from the political and military powers of the large imperialist empires. Thus, while the built environment of Naples and Antwerp was remade by their successful positions within the world economy, both cities were also shaped by their dependence upon economic and political power from elsewhere in Europe; the military power of the Spanish Empire and the cosmopolitan capital of the Genoese.

The Dutch Republic then, was neither a city-state in the vein of Venice or Genoa nor a fully fledged nation-state with a strong centralized authority. Instead it was a hybrid, something approaching the level of a nation-state by reintegrating the political and
economic functions of both the state and the built environment but formed by seven independent provinces with no explicit ‘national’ urban system (Schmal, 1998). Even well into the eighteenth century, Montesquieu would famously refer to the Dutch Republic as “…about fifty republics, all very different from one another” (Montesquieu 1748, as quoted in Prak, 2000; pp.353). Prak builds upon this premise to explicitly leave the Dutch Republic in this grey area of state formation, stating; “…the Dutch Republic was not a city-state in the strict sense of the word, but at best a confederation of city-state type polities” (Prak, 2000; pp. 343). Thus, the Dutch Republic was in many ways larger and more complex than the singular city-states of Northern Italy while its wealth was embedded in the rise of its own national merchants. However, it still lacked both the centralized urban character, the combination of political and economic power, which had been enjoyed by Venice previously as well as the imperialist tendencies that had fueled the Iberian Empires expansion of the world economy and its military power.

Instead it would be the British regime of accumulation which would achieve the reintegration of the political, economic, and social organization of Capital itself into a singular urban presence capable of manifesting and projecting its unified roles throughout the world. For if the Dutch Republic was a federation of city-states, the Kingdom of Great Britain was a fully centralized nation-state with a national urban distribution centered on the great Metropolis of London, housing the economic, political, and social manifestations of increasing capital accumulation through its built environment. The containers of power had once again increased in size and complexity but had also been rearticulated within a single urban space not seen since the Italian city-state of Venice had mastered the Mediterranean. While at the same time, the new national urban
formation was capable of drawing on a demographic base far greater than that ever envisioned by Venice and its associated Terra Firma.

The transition from Amsterdam to London was not a simple or smooth process. Like their predecessors before them, the movement of capital was littered with abortive attempts for urban development and capital reorganization. This was as true in the eighteenth century as it had been in the sixteenth century. Therefore, to fully understand the differences between the Dutch Republic and the Kingdom of Great Britain we should look beyond their particular urban manifestations and understand their built environment in comparison to another major urban center of the seventeenth century, the “free-city” of Hamburg.

As Ormrod has noted; “The slow decline of Amsterdam… was not followed in linear fashion by the rise of London, for the years from c. 1690 to 1730 saw a diffusion of the entrepôt system between London, Hamburg, and Amsterdam” (Ormrod, 2003; pp. 337). Thus, by comparing the role and transition in urban development in the seventeenth and eighteenth centuries we can provide a clearer illustration of the increasing scale and complexity of power which underlined the long-term process of urban development and the ultimate success of London to achieve global dominance.

In Northern Europe, the Hanseatic League had emerged in the previous centuries as an early version of the Dutch Republic\(^{19}\); an organization to protect the political and economic interests of a group of cities and small countries in the Baltic region. Although

\(^{19}\) At the height of the Hanseatic Leagues power in the 15\(^{th}\) century, much of the Seven Provinces of the Dutch Republic were actually part of the League, including Amsterdam (Helmott, 1902). The close association between the organization of the League in the 15\(^{th}\) century and the Dutch Republic in the later portion of the 16\(^{th}\) century is not a coincidence.
capable of furnishing armies for their mutual protection and therefore the protection costs of capital itself, the league was never an integrated political system capable of challenging the imperial powers of the period, such as Spain and its nearest geographic rival, Sweden. In this sense the League was much like the Dutch Republic would become, neither a city-state nor an emergent nation-state, but capable of internalizing its protection costs and establishing its own legal system. However, unlike the Dutch Republic of the 16th century, the League could not even be considered a federation of city-states, as few countries and cities actually enjoyed the privileges of such a system (Hansen, 2000) which ultimately collapsed.

By the end of the seventeenth century only a few cities remained within the Hanseatic League, including Hamburg, Lubeck, and Danzig. But the role and fate of these urban centers was remarkably different. While all three urban centers were important in the North/Baltic trades in the early 16th century, Lubeck and Danzig suffered stagnation and decline while Hamburg’s population exploded, more than doubling between 1550 and 1650 (De Vries, 1984; Appendix 1). The explosion of Hamburg’s population coincided with the general urban development of the period as explained by Bairoch (1988) who identified that during the 16th and 17th centuries the port cities of Europe grew rapidly, approximately 55% either doubled or tripled their population during this time period while only a small fraction of these port cities suffered stagnation or decline, most located along the Mediterranean (Bairoch; 185-188).

In this context, Hamburg became an important entrepôt for the Baltic trades precisely because it was a city without the political baggage of the Dutch federation. Hamburg was, in a sense, apolitical, offering a unique counter to the entrepôt functions offered by other
urban centers. Operating more as an independent ‘free city’ it did successfully mimic the development of Amsterdam to great success and for a brief moment was able to rival the cities of Amsterdam and London which were both embedded in various developments of a nation-state; of which the British fully succeeded.

“As a gateway between France and Northern Europe, Hamburg became more important instead of Amsterdam. Bordeaux increased in trade with the New World, mainly with the Antilles not in the age of expansion of trade with the Netherlands but in the age when Hamburg developed its trade. French trading expansion with the New World centered on Bordeaux resulted from the increasing trade connections not with the Dutch merchants but with the Hanseatic merchants” (Tamaki, 2009; pp.12)

Lindberg argues that Hamburg’s rapid development was a sign of integrating urban markets and the reformation of a distinct urban hierarchy; or in our terms a distinct urban heterarchy of counterpoised power in the urban environment of the world-economy under the Dutch, intensive, regime of accumulation.

“The rise of Hamburg as a global marketplace and financial centre in the seventeenth century was a significant sign of the bourgeoning integration of European markets. In the early seventeenth century, the urban staple functions in northwest Europe was largely concentrated in Amsterdam,
while in the late seventeenth and eighteenth centuries London and Hamburg rose to pre-eminence” (Lindberg, 2009; pp. 2).

Therefore, at the dawn of the eighteenth century, three urban centers existed as important and influential urban forms in the North Sea/Baltic Region, each capable of drawing upon significant commercial and financial functions in the world economy but with vastly different political organizations underlying them.

“With the Exchange, guild privileges no longer played a role in economic exchange. Consequently, Hamburg was the first German city to allow foreign merchants to reside locally, as the Exchange governed business opportunities. The presence of foreign merchants meant better business opportunities on the Exchange, even for local merchants. A social structure emerged that was closer to Amsterdam’s than to those of Hamburg’s old sister cities within the Hanseatic League… The foreign community in Hamburg played an important role in developing the new commercial infrastructure. It was the English Merchant Adventurers, the Portuguese merchants, and the Dutch merchants who were behind the formation of the Bank of Hamburg in 1619, using the Amsterdam Wisselbank as a model” (Lindberg, 2009; pp. 11-12).
The redevelopment of the built environment, through the reorganization of land and labor in the city, such as the development of the Bank of Hamburg and the redevelopment of the Exchange to allow foreign merchants to reside in the city, altered both the structure of exchange and circulation in the city of Hamburg and ultimately redefined its place in the economic conditions of historical capital in the sixteenth and seventeenth centuries. But this counterpoised system of capital would be brief as this reorganization was ultimately limited by the very nature of the city’s political organization; a ‘free-city’ whose very success was being driven not by its own political organization but by the emerging ‘national’ merchants of its rivals. As an urban space which offered free reign and safety to foreign merchants and capital alike, the city was also subject to the whims of that same capital.

Thus, as Hamburg was more akin to a city-state than anything else, its power in the increasing scale and complexity of the world economy was always fundamentally handicapped compared to its nearby commercial rivals. In comparison, the nation-state of Great Britain was able to draw upon a far greater demographic and political organization and emerge from the crisis of capital in the eighteenth century much better positioned than either Hamburg or Amsterdam. It was London that would begin to rapidly outpace and overshadow its former commercial rivals, precisely through its ability to harness the expanding capital and demographics of its national organization, eventually emerging as the unprecedented master of the world economy,

Earle (2001), Ormrod (2003), and Tamaki (2009) use much the same language when explaining the rise of London in comparison to other urban centers in the seventeenth and eighteenth centuries; the role of the state and the ability of London to harness the size and
scope of Great Britain, and eventually the British Empire, to exploit the world economy in a way that no other city could compete with.

“[E]xpanding foreign trade and… rising real incomes reflects very closely the experience of Amsterdam a century earlier…And indeed London’s experience reflects very closely that of both Antwerp and Amsterdam in many other ways, hardly surprising since much of what happened in London was simple a process of catching with its mentors in the Low Countries… Where London does seem different was in the duality of its function as at once a great port city and the centre of government and court, a duality that enabled it to enjoy and eventually to exploit successfully the economic stimuli of both Paris and Amsterdam” (Earle, 2001; pp. 96 emphasis added).

“It was the mercantilist state which decisively shifted the balance of power and influence towards London, through the creation of a national entrepôt within an imperial trading network. London’s unique position in the English urban hierarchy contrasted with that of Amsterdam, which never developed into a multifunctional metropolis… Beneath the advantages conferred on England by geography and location, however, lay the hand of a strong, centralised state, supporting and extending London’s
dominance within and beyond the North Sea entrepôt system. The Republic, in contrast to Britain, ‘lacked the kind of clear and unambiguous political co-ordination that came from unified and uncontested territorial sovereignty’’ (Ormrod, 2003; pp. 337-338).

“In other words, London meant the emergence of a new system. It became a capital of a world-wide empire. On the other hand, Hamburg was an old-fashioned free city consisting of cosmopolitan merchants and a center of logistics….In the long-eighteenth century Europe, the old-fashioned commercial system – free trade and cosmopolitan merchants – and a new system of modern commercial metropolis with an integrated national economy coexisted. The former was the trade in North/Baltic World and the latter was in the Atlantic World. This situation was to change fundamentally by the Napoleonic Wars. Hamburg declined and London became the core of the European Economy. After 1815, London became a capital of British Empire and the center of World Economy” (Tamaki, 2009; pp.20).

Understanding London’s historic position as the head of the British national urban hierarchy is not a new development; the long-term and uncompromising protection of
London from the time of Cromwell in the sixteenth century through the nineteenth century has been well understood (O’Brien, 2001; Tracy, 1991). Although Braudel neglected the geopolitical context of the urban development through the rise of capital, Tracy (1991) and O’Brien (2001) both rectify this omission in their edited volumes and place the prominence of London squarely in the context of the political protection and organization under the British state.

“Clearly the scale and nature of accomplishments in [the built environment] can be linked to the quantity and quality of resources mobilized for the construction and reconstruction. Although actual investments cannot be quantified, it does seem as if elites in… London found the money, motivation and spaces required to redesign rather considerable areas of their cities” (O’Brien, 2001; pp. 21-22).

The comparison of three commercial entrepôts in the seventeenth century, Amsterdam, Hamburg, and London, illustrates the underlying importance of the containers of power within the world economy. Thus, the census of 1801 can call London, “the Metropolis of England, at once the Seat of Government and the greatest Emporium in the known world” (quoted in East, 1948; pp.494). Hamburg, a throwback to the city-state model of Venice itself, while successful for a period, was ultimately subject to the ambitions of the Dutch, English, and other foreign merchants, just as Naples had been subjected to two centuries prior. While Amsterdam itself was ultimately incapable of drawing upon a fully integrated and developed national state to support its endeavors and the continued
expansion of capital in the eighteenth century; Hamburg too would fail to maintain itself
next to the city which would emerge as the economic and political center of its own state
– London.

“Pushing Braudel’s one stage further, we can characterize
the contrast between Amsterdam and London in terms of
the emergence of a new kind of entrepot system: the one a
modification of the old city-centered staple system, a
central staple market; the other, a modern commercial
metropolis with an integrated national economy as its
hinterland. In this sense, the rise of British nation state
provided the basis and the starting point for a new pattern
of economic development” (Ormrod, 2003; pp.6)

Thus, the increasing scale and complexity of the world economy and its intimate
connection to the development of the built environment, is a central tenet of the
explanation of the role of Amsterdam, London, and other urban centers in history.
However, this is only one aspect of an overall process in the movement of capital and
urbanization. The changing nature of capital accumulation itself, through the
reorganization of land and labor in the world economy, must be understood occurring in
tandem with the changing scope of the political and economic conditions of cities and
states.
Section 5.2: The Dialectic of Urbanization

The rise and unprecedented domination by London in the world economy cannot be explained by the ‘containers of power’ alone. Many other urban centers were rapidly emerging as the new centers of national powers during this time period; Paris and the French state being both a conspicuous and continuous rival to the British throughout the period. Yet, despite alternative urban formations, the rise of a world-economy centered upon British urban hierarchy was unprecedented in the historical conditions of capital and the built environment; a process which emerged from both the increasing size and complexity of the containers of power, as illustrated above, but also from the double movement of capitalist organization and development outlined by Arrighi (1994); the dialectic of urbanization.

“For the “industrialization” and “imperialism” of the British regime of accumulation in comparison with the preceding Dutch regime were expressions of a double movement – forward and backward at the same time – analogous to the one that had characterized the transition from the first (Genoese) to the second (Dutch) systemic cycle of accumulation… [T]he British regime superseded the Dutch through the internalization of production costs, of which industrialism was the main expression. And just as the Dutch regime had internalized protection costs
through a backward movement consisting of a revival of the organizational structures of Venetian state monopoly capitalism, which the Genoese regime had superseded, so the British regime internalized production costs through a revival of the organizational structures of Iberian imperialism and Genoese cosmopolitan finance capitalism, both of which the Dutch regime had superseded” (Arrighi, 1994; pp. 176-177).

The dialectic of urbanization within British hegemony was the result of two intertwined conditions of historical capital based upon a double movement of internalized production and extensive, imperial domination. The single territorial organization of the British state and the imperial expansion of the British empire, created the conditions for a revival of centralized, hierarchical, urban development by superseding the decentralized development of the Dutch Republic through a revival of a built environment analogous to the Genoese-Iberian world-economy. By internalizing production within the built environment of the state and the empire, the British regime facilitated the increasing accumulation of capital and a new level of urban development to heights far beyond the limits of the preceding Dutch regime.

Under the extensive, cosmopolitan-imperial regime of Genoese capital and Spanish Empire, the form and function of the built environment and the city was most distinctly achieved in the rise and place of Naples in the urban hierarchical distribution of the sixteenth century. As a nexus of Spanish imperial power and Genoese merchant capital, the city of Naples was redeveloped to become one of the largest urban centers of the
world-economy and reorganized the previous relationship between land, labor, and capital by superseding the territorial, spatial, limits of urban development Venice had been capable of.

However, the limits of accumulation under this regime were most clearly identified in the absence of Genoa itself – the home territory of the capitalist class – from the list of major cities. This cosmopolitan capital was incapable of utilizing the profits and surpluses of their own design to redevelop the built environment of the city-state itself. Thus, the development of the urban world-economy was limited through the spatio-temporal conditions of Genoese dependence on Spanish protection and the limited demographic and spatial dimensions of a city-state so that the urban development under capitalism was limited to the external centers of trade and imperial power; i.e. Naples.

Whereas, the Dutch regime had been able to overcome this limitation of urban development and the reinvestment of capital into in its own built environment, through the internalization of protection costs in the development of a loose federation of territories which formed the Dutch Republic. This internalization ensured that the development of a built environment for the expansion of capital in Amsterdam could be protected and further, form a governmental organization capable of ensuring access to land and labor outside the limits of the city itself; a strategy of capital organization and urban development distinct from the previous regime of the Genoese.

“The conquest and incorporation of territory into the domains of the Dutch state and of its chartered companies were limited to what was absolutely essential to the
profitable expansion of Dutch business. Through this strategy of power, the Dutch carved out of the far-flung Iberian territorial empire, first a small and secure homeland in the Netherlands – “a fortified island” as Braudel (1984:202) has called the United Provinces – and then a highly profitable empire of commercial outposts stretching across the Atlantic and Indian Oceans.

The main advantage of this strategy lay in its flexibility. It kept the ruling groups of the United Provinces free from the responsibility, troubles, and commitments involved in the acquisition, governance, and protection of large territories and populations…” (Arrighi, 1994; 200).

We can therefore understand that the Dutch and their associated strategy of capital accumulation was capable of developing an internal urban structure based upon the intensification of the world-economy. The strategy of Dutch accumulation was most directly embodied in the development of Amsterdam and its corresponding built environment as one of the largest cities within the spatial dimensions of the world-economy in the seventeenth century. This decentralized urban formation was embodied within the provinces of the Republic, Braudel’s ‘fortified island’, which created an urban rival to all but the largest cities of the day but which never developed or initiated the construction of a built environment outside its home territory; the formation of externalized urban formations for capital accumulation seen in Antwerp and Naples previously.
The British dialectic then, superseded the Dutch regime of accumulation by the development of urban centers capable of internalizing the costs of production itself; industrialization being the prime example but not the only one as materials for British industry became vital elements of production itself. By remaking London, as both the center of world entrepôt trade, manufacturing, and even governance (recall that Amsterdam was not the capital of the Dutch Republic) the great Imperial Metropolis was born to such dimensions that it far outstripped its European rivals and became the largest city in the world-economy. The internalization of capitalism into a territorialist state engendered the conditions necessary for the national urban distribution of British cities to reorganize the built environment and the division of land and labor to such an extent that other urban centers such as Manchester, Glasgow, and Birmingham achieve new demographic dimensions that place them among the largest cities in the world. Where the Dutch regime had only engendered the development of Amsterdam in the world urban distribution, due to the “…absolute and comparatively narrow territorial and demographic base of Dutch Power” (Arrighi, 1994; pp. 202), the British nation-state propagated the rise of an entire national urban distribution within the world distribution.

If the British regime superseded the Dutch regime by the internalization of capitalism, it internalized production through the backward revival of the imperial organizational strategy of the Genoese-Iberian regime and the external development of urban centers through which the cosmopolitan character of its capitalist class could exploit land and labor for the self-expansion of capital. Thus, just as Naples and Antwerp had been developed several centuries before as a nexus of imperial power and cosmopolitan wealth, the colonization and urban development of the British Empire, especially British
India, respawned the subject imperial cities of capital exploitation. The subjugation of Dehli, Lucknow, and Hyderabad and the rise of Madras, Bombay, and Calcutta stand as sentinels in the urban distribution of the world-economy; overwatching the expansion of British capital but ultimately to be bled dry as components of the capital system through the exploitation of land and labor in British India.

Thus, the urbanization of the world-economy in the nineteenth century was the culmination of the intertwined strategies of national and imperial urban development. Urbanization reached new heights and influence under the auspices of British capitalism as the internal development of the British state and the external development of the British Empire directed a hierarchical organization of the urban world-economy in the nineteenth century through the ‘containers of power’ and the dialectic of capitalism in urban development.
Section 5.3:

Building Capitalism: Entrepôts of Industrialization and Imperialism

The contrast between London as a world entrepôt, in a similar vein to the United Provinces, and its role as a center of industrial and imperial production has been debated by many scholars (Ingham, 1984; Anderson, 1987; Brown, 1974) and more recently by again by Barnett (1998) and Ball and Sunderland (2001). As Arrighi (1994) discussed, this has led to two competing characterizations of British capitalism and therefore the role of London and the urban form which emerged in response to the reorganization of the world economy. One which characterized London as a new version of the older entrepôt capitalism of the preceding Dutch regime: “[I]ke the Dutch, the British regime was still based on the principle of commercial and financial intermediation…of being supplied by the whole world in order to be able to supply the whole world again” (Arrighi, 1994; pp. 174-175). The other emphasized the uniqueness of London’s role as an imperial power which conquered a far flung territorial empire based on agro-industrialism, not mercantilism:

“[Contrary to the views equally of Lenin and of Gallagher, Robinson and Fieldhouse, no w repeated by Ingham and Anderson, most of the British Empire had already been established by 1850 – not only in Canada, and the Caribbean, Madras, Bombay, and the Cape Coast from the seventeenth century, but in Gibraltar, Bengal, Ceylon, the Cape, Botany Bay, Penang, Guiana and Trinidad by the end
of the eighteenth century…To believe that British capital had basically a banking and merchanting role in the Empire would require us to suppose that there had been in the Empire no sugar and cotton plantations, no tea and rubber estates, no gold, silver, copper and tin mines, no Lever Brothers, no oil companies, no Chartered Company, no Dalgerty, no British-owned railways and other utilities or mills and factories overseas” (Barrat Brown quoted in Arrighi, 1994; pp. 175-6).

However, Arrighi (1994) argues that there is no contradiction between these points. Rather, understanding the ‘double movement’ of historical organization allows us to fully comprehend both the nature of British capitalism and more specifically the role of London and British urbanization which drastically restructured the urban distribution towards a stark, hierarchically oriented form from the mid-eighteenth century onwards. The British were both mercantilist in nature, like the Dutch before them, but also industrial and territorial with the revival of the cosmopolitan-imperialist structure of the Genoese-Iberian regime the Dutch had superseded.

“Britain in the nineteenth century did follow the developmental path of Venice and of the United Provinces; but it also followed the developmental path of Imperial Spain or, more precisely, of the Genoese-Iberian capitalist-territorialist complex…[T]he “industrialism” and “imperialism” of nineteenth-century Britain were integral
aspects of its enlarged reproduction of the strategies and structures of Venetian and Dutch entrepôt capitalism. It was precisely by being industrial and imperial in ways that neither Venice nor the United Provinces had ever been that Britain could exercise the functions of world commercial and financial entrepôt on a much grander scale than its predecessor ever dreamt of doing” (Arrighi, 1994; pp. 176).

Thus, while the Port of London was the world’s entrepôt, it was also Schneer’s (1999) “nexus of imperialisms”, meaning that as it was performing one role it expanded the other and reached a new dimension, providing the basis on which London grew and outstripped its global urban rivals to become a city of nearly unprecedented size and scale. The world came to the Port of London everyday and performed an act of obeisance and through that act the city of London was able to achieve a new level of profit through re-export trade.

“Far from being in contradiction with one another, the “workshop” and the “entrepôts” functions exercised by Britain in the nineteenth century were the obverse and mutually reinforcing sides of the same process of world market formation. This process has been the fount and matrix of our times…” (Arrighi, 1994; pp. 213).

When foreigners would visit London in the 19th century they were amazed at the urban development which stretched before their eyes. As one American said in 1895; “One may
go east or north or south or west from Charing Cross…and almost despair of ever reaching the rim” (American visitor 1895; quoted in Schneer, 1999; pp.4). London, as the largest and most powerful city in world history was breathtaking in its sheer size and capacity to overwhelm everything else in the world. However, to understand how the political, economic, and social conditions of capital merged in the process of British urban redevelopment, of which London was the preeminent icon, we must examine how the built environment itself was transformed through the reorganization of land and labor.

The role of entrepôt for both London, British urbanism, and the organization of the global urban distribution is central to this premise. As the world’s entrepôt, London, embodied and symbolized many aspects of its place as the unsurpassed city of the world. This process began with the reorganization of commerce at the dawn of the eighteenth century, as foreign, cosmopolitan, capital sought to break the monopoly capitalism which followed the Dutch model of economic success and reorient trade and capital flows within the internal boundaries of British control.

“Closer examination of the English commercial revolution suggests that, in fact, the dismantling of monopoly powers and regulated trading provided the basis for London’s rise as a world entrepot. The replacement of a cluster of commercial monopolies by the single overarching monopoly of the navigation code was the product of an opposition movement, on long-running tensions within London’s merchant community and of the persistent activity of interlopers and non-merchant groups… The
impetus for change came not from the commercial elite, whose interests were often bound up with corporate trade, but from outsiders, especially the Atlantic traders who, in many ways, remained outsiders” (Ormrod, 1998; pp. 695-696).

This contradiction between the interests of the commercial elite of English shipping and the both internal and external groups, merchants and others stemmed from a variety of reasons. One, the growing importance of the Atlantic trade with England’s expanding overseas possessions, as highlighted by Ormrod (1998) above. The other, the growing dominance of trade to London within the nation itself. By the start of the eighteenth century, the population of London represented one in every 9 residents of the population of England and Wales. This incredible concentration of urban population has been seen as the starting point for much of the ‘revolutionary’ changes in production which were to follow throughout the century (Rude, 1971; Fisher, 1990).

In 1700 the city of London accounted for somewhere between seventy and eighty percent of the total urban population within England and Wales. This immense concentration of the urban population led to a new organization for land and labor as the urban consumer market was almost wholly dependent upon London and pushed to meet the ever

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20 The level of London’s dominance in the urbanization of England and Wales is dependent upon the cutoff used to define an urban place. Thus, Ormrod (1998) only addresses cities whose population exceeds 10,000 inhabitants with the 575,000 estimated inhabitants of London accounting for eighty percent of the urban population. Using Chandler’s (1987) estimated yields a similar value of just under eighty percent of the urban population but this is because Chandler considers London to be smaller in 1700, at only 550,000 residents, than Ormrod. In contrast, de Vries (1984) has no baseline cut-off for considering urban populations and therefore estimates the total urban population of England and Wales as much higher than Ormrod, at 842,000 residents; thus London only accounts for approximately seventy percent of the total population by de Vries.
increasing demands for food, materials, and other goods which the city needed and desired. In the 1720’s, on his journey across Great Britain, Daniel Defoe remarked that “…every part of the Kingdom was ‘employ’d to furnish something to supply the city of London with provisions” (quoted in Rude, 1971; pp. ix).

As Linda Clarke (1992) has shown in her intensive examination of Brill Farm and its association with London, the expansion of capitalist agriculture in Britain, “…was accomplished through a steady reduction of farm servants, hired and boarded over a long term, and an increase in the labour temporarily employed, often on piecework…” (Clarke, 1992; pp.89). It was during this time that the south and east of England were transformed into the ‘bread basket of Britain’ accompanied by increasing transfers and concentrations of land ownership.

As the unquestionable center of the British national economy the city of London pulled the entire country into its sphere to provide it with the necessities and luxuries its population needed and desired. This organization of economic distribution in the British nation was so great that by 1725, Rude can list goods and materials consumed in London in the hundreds of thousands and even millions; “…115,000 bushels of oysters, 14,750,000 mackerel, 1,398 boatloads of cod, haddock and whiting,…not to mention 1,970,989 barrels of beer, 30,000 turns of wine, 11,200,000 gallons of spirits,…” (Rude, 1971; pp.20).

When speaking of London’s importance in the role of manufacturing and consumption in the nineteenth century, Ball and Sunderland argue that the presence of London created a national mass market that was no longer focusing on export but rather on furnishing the
increasing domestic demand of the great metropolis and eventually its rising urban brethren such as Manchester, Liverpool, etc. “London’s advantages as the wealthiest and largest consumer market in the country, the greatest and most diverse source of skilled labour, and its central position in the nation’s transport networks sustained a large manufacturing presence throughout the period… Of particular importance to manufacturing in London was that rising incomes, technical innovations, and the adoption of marketing all slowly created a national mass market in the broadening range of consumer goods” (Ball and Sunderland, 2001; pp.56-57).

Here we can understand that London served as the central organization of the British nation state itself both as the governmental capital but also as its commercial center of consumption and organization. Combined with pressure from its growing Atlantic concerns and the increase of foreign merchants, the internal reorganization of London as both a world entrepôt and national focal point would create a built environment that went far beyond its older rival, Amsterdam, in every aspect.

“During the 1690’s, then, English overseas trade was reorganized so as to provide a greater measure of internal ‘free trade’, in the sense of more open participation in commerce, combined with a much increased level of external protection… Huguenot, Dutch, and German merchants took over a large share of that trade, and it has been estimated that foreign capital financed more than one-third of English domestic imports by 1695… In fact the influx of foreign investment in England’s trade with nearby
Europe released resources for the expansion of long-distance trades, and the internationalisation of London’s merchant community contributed additional financial, commercial, and cultural resources for a new kind of world entrepôt which would soon replace Amsterdam” (Ormrod, 1998; pp. 687).

This ‘new kind’ of entrepôt was the culmination of both an imperial entrepôt for the rising British Empire and a national entrepôt for the British state. Within the built environment itself these mutually reinforcing dynamics of capital would manifest themselves in striking ways. Already in the eighteenth century, Rude remarks, “…London was also a vast consumers’ market, a considerable manufacturing city, the largest centre of international trade and shipping in the country, and was already well on the way to supplanting Amsterdam as the leader of the world’s insurance and money market” (Rude, 1971; pp. 20).

This imperial metropolis was a microcosm of the British Empire; a product of complex political-economic and social interactions, of reciprocal, occasionally antagonistic forces and processes (Schneer, 1999). It was what the British Empire was, should, and could be contained within 15 square miles of urbanity\(^\text{21}\). But this did not make it an imperial city such as those it modeled itself after. “For if the British Empire was the most powerful the world had ever known, it yet lacked an emperor whose every vision of London could

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\(^{21}\) The 15 square miles was calculated from cartographic maps of London in 1801 which covered a total area 3,870 hectares.
become an architect’s command. Great Britain was a constitutional empire and a capitalist one” (Schneer, 1999; pp. 27).

But it was no less an imperial empire and therefore London was both the beating heart of the empire and its face. For it was here that the peoples from all over the world came to see what modernity and power looked like. “London acted like a magnet not only on the produce of empire and the funds which facilitated its functioning, but on the peoples of the empire and the world beyond…The empires, formal and informal,…contributed to the capital’s cosmopolitan character” (Schneer, 1999; pp. 7-8).

Therefore, London and its associated built environment were central to the expansion of capital through investments in real estate, manufacturing, etc. But it also served as an idea; a manifestation of what foreigners should see and what its domestic population should want. For if London was the center of economics in Britain, it was also the center of politics and social interaction and therefore the city reflected these mutually reinforcing roles of power and money nationally and internationally.

“…[I]mperialism was central to the city’s character…, apparent in its workplaces, its venues of entertainment, its physical geography, its very skyline: apparent, too, in the attitudes of Londoners themselves…London’s meaning was disclosed in the city’s physical appearance, in the layout of streets and avenues, and in the buildings and public monuments which lined them. London’s built environment, such figures maintained, should be
appropriately imposing. It should convey a sense of Britain’s world role, of its preeminence, so that Londoners would, as if through a process of osmosis, come to understand what their attitudes toward empire and the imperialized peoples should be. To those who embraced this view, the imperial metropolis was not so much a machine for making money as it was, at least partially, a machine for making imperialist-minded citizens” (Schneer, 1999; pp. 13, emphasis added).

It is not surprising then to find that many public art displays in London were consciously modeled after historical displays of imperial power; Waterloo Place and the Duke of York’s column was based on Emperor Trajan’s Column and Nelson’s Column in Trafalgar Square was based on Mars the Avenger in the Forum Augustus, both in Rome. While the Egyptian flourishes along the Victorian Embankment marked an unspoken connection to the great empires of the old pharaohs.

The idea of British domination and power were not set in its art and grand buildings’ facades alone. The idea of empire and the role of the urban population was perpetuated in other ways as well. Capital understood this reinforcing process even within the production process itself, leading many companies to advertise themselves as central to the imperial nature and success of the British state. “The antiseptics of Empire” or “upholding the British flag and contributing to the success of British valour” (quoted in Schneer, 1999; pp.6).
One element of London in particular that embodied its role both nationally and internationally was the Port of London. The Port of London itself has been seen as the idea of British Empire manifested; its physical space, economic power, and massive labour force were central to the economy of not only London but the country and empire as a whole. This was where the rest of the world performed daily, a symbolic act of obeisance, to the city and its empire as goods and riches extorted from around the world were brought to the great entrepôt to be resold and profited upon. Schneer saw the docks as the place “…where the empire both ended and began, they were its safe edge. The London docks were, in short, a crossroads of people, things, and attitudes, a nexus of empire…a nexus of imperialisms” (Schneer, 1999; pp. 39, emphasis added).

Its physical presence alone was staggering. By the end of the 19th century the docklands alone covered nearly 26 square miles of space with warehouses reaching 5 to 6 stories and some occupying more than an acre of land each. In total the docklands covered 416 acres of land and more than 1,100 acres of water by 1900. Its labor force directly employed some 30,000 men while many small establishments of various shapes and sizes, including cafes serving cheap food and drink, employed an unknown number more.

“Dockland contained a large labor force whose earnings depended more directly, although not entirely, upon the maintenance of empire…Every sunrise tens of thousands of men could be seen already hard at work unloading the riches of empire from the holds of great ships, then sorting, carrying, trucking it along the quays and wharves which lined the river, and finally cataloging, stacking, and
packing it in the vast warehouses behind” (Schneer, 1999; pp. 6-7).

In addition to the docklands, there were some 320 wharves lining the Thames River, the original port operations prior to the building of the wet docks in the 19th century; these wharves probably employed some additional 20,000 men in their operations. The wharves usually consisted of only quays with warehouses behind them to which smaller ships could tie up to. These were not capable of dealing with the larger vessels engaged in international commerce, primarily due to their draft, but could accept lighter’s, flat-bottomed barges, which would transfer the cargo from the larger vessels anchored in the river to the wharves. By the time of the signal crisis of British hegemony and the height of London’s urban dominance, the two systems of the Port of London directly employed over 50,000 men and handled more than 14.5 million tons of cargo every year for the city (Lovell, 1969; Schneer, 1999; Hobhouse, 1994; Museum of London, Docklands).

This dominance of the Port was also attested to in the percentage of trade London held in relation to Great Britain. Throughout the eighteenth century, London accounted for more than sixty percent of the nation’s total foreign trade and more than fifty percent of the total tonnage of shipping entering British ports (Rude, 1971). Thus, by 1802, the private banker Henry Thornton was able to speak of London as “the trading metropolis of Europe and, indeed, of the whole world” (quoted in Cassis, 2006; pp.19).

Even as these percentages began declining in the eighteenth and throughout the nineteenth century, due to the emergence of alternative, modern, port facilities in
Liverpool and elsewhere, there continued to be an absolute increase in the value and quantity of the goods entering the London Port.

The entrepôt of London was indeed a ‘new’ form for the city in time and space. As the center of British national urbanization and the center of British imperial expansion, the London entrepôt truly became a ‘nexus’ of concentrated power and wealth far beyond that ever imagined by either the decentralized Dutch metropolis of Amsterdam or even its apolitical but imperial predecessor in Naples. The duality of London marked the full convergence of the containers of power into a nation state whose commercial and political capital were one and the same and the dialectic of capital accumulation which saw the revitalization of the imperialist city.

It is under these conditions, the commercial and financial intermediation of the entrepôt city and the ago-industrialism of the imperial city, that we are capable of fully understanding the development and contradictions embodied in the built environment of London itself. For the extensive regime of British capital required a seat of economic, political, and social power capable of bridging these endeavors and a new organization of the urban form to perpetuate and expand the new dimensions of capital in time and space throughout the world.
Section 5.4:

Building Capitalism: London and Paris in the Age of Credit and Empires

If London was the nexus of imperial and national organization for the accumulation of capital it was also to become the new center of finance; surpassing the last vestiges of dominion the Dutch in Amsterdam had maintained through the eighteenth century. For if the world came to perform a daily act of subservience to Britain at the London docks with almost limitless goods and services to be had at a price from throughout the world; so too did the world come to London to purchase a piece of the empire.

“The City’s financial architecture – in other words, the combination of services that it was able to provide – was essentially in place by the second third of the eighteenth century. However, it was still Amsterdam that held sway over the international market… Things changed from the 1780s onwards, when Anglo-Dutch trade rivalry finally turned to Britain’s advantage, as trade was strengthened between itself and its colonies, and British traders and industrialists became increasingly independent when it came to financing their exports to the United States. The naval war that the two countries fought between 1780 and 1784, completely ousting Dutch ships from the Baltic, dealt a serious blow to Dutch preeminence. But it was above all
the French wars that brought about a complete reversal of roles” (Cassis, 2006; pp. 19).

By the nineteenth century the world of international finance had swung unquestionably to London as the new capital being accumulated in trade and production was reinvested in new ventures for its own self-expansion. The Bills of Exchange, drawn for international trade from the City merchants were estimated to have reached £30 to £40 million sterling by 1836; over half of these devoted to the Anglo-American trade across the Atlantic (Cassis, 2006; pp.19).

It was here, in the city which dominated the world through commerce, production, imperialism, and finance that the world was for sale. “They were buying, selling, and trading goods of all descriptions: bonds, futures, stocks in Chinese railways, Latin American sugarcane fields, African gold mines, Borneo rubber plantations, Ceylonese tea farms. For London contained not only the world’s busiest port, but its richest, most cosmopolitan financial center” (Schneer, 1999; pp. 7).

But London was not assured its dominance, even after the collapse of Dutch shipping and the crisis of capital in Amsterdam and the Dutch Republic. The rise of national urban distributions with imperial designs on the world economy was not isolated to London and the British Empire. Paris, the omnipresent force of French urbanization, had many of the same conditions of London for the expansion and accumulation of capital within its built environment.

Always the primary demographic challenger to London in Europe, Paris had actually been demographically larger than London in the seventeenth century, by as much as
100,000 inhabitants in 1650. By the turn of the eighteenth century this position had changed as London’s rapid growth surpassed Paris by more than 50,000, making London the most populous city in Europe, a title it would not rescind for over two centuries.\(^{22}\) The importance of Paris however cannot be pushed aside as the city and its associated state with its own imperial designs operated in much the same manner as we have seen in London.

Paris was the center of both domestic and international trade in France, despite its landlocked status at the center of the French nation-state. In addition, the expanding French Empire provided the same imperial impetus for the expansion of the world economy. If London had a true rival to supersede the Dutch corporate-national organization of the world economy, it was Paris.

The rise of Paris as an international financial center also served as a counter to the power and wealth enjoyed by a rising London. Just as Paris served as the center of governmental power, the center of commercial trade, and the image of France, so too did it serve the financial interests of both France and Europe.

“The appeal of Paris’s financial centre can be explained first by its role in financing domestic and international trade. Not only was almost all domestic trade handled in the capital, but numerous foreign merchants, especially Swiss, regularly drew bills of exchange on Paris. The Parisian financial centre’s role as a centre of international

\(^{22}\) Population comparison made by authors calculation of city spatial sizes from the sixteenth to the nineteenth centuries.
settlements is partly explained by the banking houses of the haute banque and by the trust that they inspired in their clientele. Yet this explanation is inadequate. As Maurice Le’vy-Leboyer has clearly demonstrated, Paris’s role was above all due to France’s position in the multilateral system of payments. In spite of its relatively modest foreign trade, France played an important monetary role, since it was the only country in continental Europe that had balanced trade with Latin America and a positive trade balance with the Anglo-Saxon countries. The franc was an international currency because, on the one hand, the British and Americans were trying to obtain bills of exchange on Paris to pay for some of their purchases and, on the other hand, the merchants of continental Europe were using the Paris centre to clear their debts with the Anglo-Saxon countries” (Cassis, 2006; pp.29).

However, Paris was never able to fully compete with its English rival as its steady loss of ground, demographically, to London attests. Its position to counter the importance and rise of London was only able to be sustained as long as the competing interests of urban trade centers remained. As discussed previously, in the seventeenth century, when Paris was substantially larger than London, three cities served as entrepôts to world trade in the North Sea and Baltic regions; London, Amsterdam, and Hamburg. Under this condition, of counterpoised power in international commerce, Paris and by association France,
could rely on other powers for its shipping with its emerging imperial possessions. Thus, the existence of Amsterdam, as the dominant center for international trade and Hamburg, as a free city open to all foreign trading, served as central gateways for French capital centered in Paris. As Tamaki illustrates:

“….there was a great difference of transport systems between Britain and France. Britain could carry their goods by their own ships with their mercantile policy. Britain had come to form ‘British Empire’, which was, I think, a development system of Fiscal-Military State. France had to charter English or Dutch ships in the North and Baltic Seas (not in the Mediterranean or the Atlantic). Moreover, England could re-export colonial goods from North America to the North Sea and Baltic areas through the British ports directly. France, on the contrary, had to rely on Amsterdam or Hamburg for the distribution of colonial goods from the Antilles” (Tamaki, 2009; pp.1)

Thus, especially with the decline of Amsterdam and Hamburg, the ability of Parisian capital to facilitate its own self-expansion through trade and thus continually redevelop the built environment of Paris itself to rival that of London, was limited by the very nature of London’s emerging dominance as the center of world trade. Under the counterpoised distribution of power in the world economy under the Dutch regime of accumulation, the city of Paris had emerged to be even larger than London or Amsterdam. However, with the superseding of Dutch hegemony by the expansion of
British imperialism and the rise of the British nation-state, the basis of Paris’ urban dominance was undermined such that it would steadily fall behind London’s population growth throughout the eighteenth and nineteenth centuries.

“But one could not speak of protecting or of promoting the centre, whose status was seen as the consequence of Britain’s dominant position in world trade. Nor could one speak of real competition among centres; Amsterdam handled its decline as best it could, and Paris was not yet in a position to vie with London” (Cassis, 2006; pp.38).

While Cassis (2006) speaks of Paris as not yet being able to compete with London, I would argue that Paris lost its competition with London at the very point the heterarchy of Dutch hegemony unraveled in the eighteenth century. It was at this point that Paris, despite its similarities to London, was left incapable of drawing upon and profiting from the full resources of the expanding world economy as it could not internalize production within its expanding imperial boundaries as the British could through the domination of international shipping.

In this condition, the economic basis of Paris’ expansion could not compete with its rival across the channel and the reorganization of its built environment would be much more limited until the second half of the nineteenth century and the rise of the Second Empire. “Paris may have been more beautiful, but it was less imposing than London, and it served as metropole to a smaller empire than the British” (Schneer, 1999; pp. 4).
This is not to imply that Paris declined, far from it. The city continued its expansion to heights far beyond that achieved by previous urban centers elsewhere in Europe. However, its growth rate was consistently lower than that of London, leading to an ever increasing disparity between the size of London and the size of Paris.

Thus, by 1802, Henry Thorton can proudly proclaim:

“London also is become, especially of late, the trading metropolis of Europe, and, indeed, of the whole world; the foreign drafts, on account of merchants living in our out-ports and other trading towns, and carrying on business there, being made, with scarcely any exceptions, payable in London. The metropolis, moreover, through the extent of its’ own commerce, and the greatness of its wealth and population, has immense receipts and payments on its own account; and the circumstance of Its being the seat of government, and the place where the public dividends are paid, serves to increase its pecuniary transactions” (Thornton, 1802; pp.59-60).

With the growing financial power of British capital, the ability to invest in the development and redevelopment of the built environment and the reorganization of land and labor for its own self-expansion was assured. The constant expansion and redevelopment of London was already well underway before the nineteenth century. Rude (1971) compares the map of London by John Strype in 1720 with the ‘City Guide...
of London, Westminster, and Southwark with the New Buildings to the Year 1761’ to understand how the city had “spread and sprawled…by a combination of planned development, speculative building, and simple economic pleasure” (Rude, 1971; pp.3).

Both Rude (1971) and Clarke (1992) illustrate the constant expansion beyond the traditional borders of the City. New bridges across the Thames such as Westminster Bridge in 1750 and Blackfriars Bridge in 1769 and many new roads expanding and improving the transportation infrastructure surrounding and through London. New laws such as the London Building Act of 1774, set standards for the buildings of houses and class of occupants which Clarke identifies as facilitating the rapid growth and expansion of both the city and its outlying fringe “[In] setting the minimum standards for dimensions and building materials and prices for housing, churches, manufactories, and workhouses… the range and quality of materials to be used, the Act created optimum types to the benefit of materials manufacturers. It was a counterpart to measure and value and to the leasehold system, facilitating the use of price books and lump sum building contracts for different grade housing” (Clarke, 1992; pp.108)\(^{23}\).

In this way, new urban developments could be quickly contracted and established to achieve the required returns on capital investment with limited risk for those involved. In these new urban fringes, the older regulations and guilds of the city’s laboring class had no power. Thus, massive new areas around the old core of London became the home and

\(^{23}\) Clarke of course goes on to describe how these statutes were often ‘inoperative’ for working class housing since few surveyors, those hired by the city or the county for enforcement, were actually employed to accomplish this and those few which were employed were disinclined to take action against buildings which violated the Act because if they lost the case, they were forced to pay themselves (ibid; pp.108-109).
workplace of the thousands of displaced laborers from the growing consolidation of agriculture in the region.

This new urban development was based on certain conditions which favored capital and which undermined the old institutions of the guild system since the London Building Act of 1774, the basis of the building system for the entire metropolis, assumed that prices and wages did not fluctuate and that the responsibility of determining wages and earnings were between the employer and the laborer as individuals, not as part of a guild or other organized, collective, form of organization.

“It was in effect a system tailored for piece-work in the sense that the input of each trade was clearly defined for each standard grade. Each part of a particular grade house was, for instance, broken into different items with different rates attached and payment based on the subsequent measurement by the measurer of each gang’s work. Earnings on this basis were potentially unlimited. Thus, though it assumed fixed rates, the system applied in fact encouraged fluctuations in earnings and individual rather than collective bargaining” (Clarke, 1992; pp. 109-114).

In this way, the increasing nature of wage labor employment and migrating populations to London, created a new system of housing; the tenement. Whereas the traditional form of housing had been through the workshop and the customary accommodation of the tradesmen, the new urban form of multi-occupancy buildings offered both
accommodation for the wage laborer and the opportunity to increase the rent and revenues of landholders throughout London and its metropolitan region. Thus, Adam Smith himself observed,

“There is no city in Europe in which house-rent is dearer than London and yet I know of no capital in which a furnished apartment can be hired so cheap… A tradesman in London is obliged to hire a whole house in that part of the town where his customers live. His shop is upon the ground-floor, and he and his family sleep in the garret; and he endeavors to pay a part of his house-rent by letting the two middle stories to lodgers. He expects to maintain his family by his trade, and not by his lodgers. Whereas, at Paris and Edinburgh, the people who let lodgings have commonly no other means of subsistence; and the price of the lodging must pay, not only the rent of the house, but the whole expense of the family” (Smith, 1801; Book I, Chap 10, pp. 120).

The ever increasing wealth of the city’s capitalist class and a rapidly expanding population would lead London in a construction boom that seemed almost without end for much of the period. What H.J. Dyos called “the irresistible growth of London…[ had become]… a magnet for speculative capital” (quoted in Barnett, 1998; pp.220). Such was the ferocity of the expansion of built environment that housing stock alone increased by 120,000 between 1750 and 1831, despite two decades of war. It has been estimated that
over fourteen percent of London’s working population was employed in the construction
industry as not only housing but docks, bridges, roads, factories, warehouses, and so on
exploded to remake the built environment of London in an entirely new image (Barnett,
1998). “The foundations for the further huge expansion in the later nineteenth century
had been well and truly laid during the half century from 1775 to 1825” (ibid; pp. 221).
Section 5.5:

The ‘Ecological Marvel’ and the Crisis of Capital in the Built Environment

In 1800 London was the largest city in the world, surpassing even the great demographic urban spaces in China and Japan. However, within another 50 years the city would more than double its population again, surpassing 2.4 million according to the British census at the time. We know that London, as the political, economic, and social center of the British nation state and the British Empire, had combined to form an unprecedented base for the accumulation of people and capital under the new regime, superseding the Dutch regime under a distinctly hierarchical urban formation. In this way, London was the new fount of capital accumulation by channeling the demographic reorganization of the entire state to itself as well as the extracted capital from throughout the empire.

But how was London able to facilitate the accumulation and reinvestment of this new massive flood of capital and population continuously for over two centuries? How was the built environment of the great Metropolis able to be developed and redeveloped so successfully as to continually be a profitable investment strategy for so long and on so large a scale?

To answer these questions we must return to understanding why urbanization and capital accumulation are so intertwined. While Marx may have been correct when he said that the “foundation of any division of labor…is the separation of town and country” (Marx,

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24 By two centuries I am referring to the period where London began to experience a rapidly increasing urban population starting in the mid-seventeenth century, closing the gap between its population and that of the older urban centers such as Istanbul and its rivals such as Paris, Naples, and others. Through its peak of unprecedented growth and expansion in the waning decades of the nineteenth century.
1967; pp. 352), he failed to understand the division of labor and class within the built environment of the town. In fact it was Frederic Engels who challenged Marx’s assumptions on the role of urban development in the reproduction of capital and the built environment when he discussed the ‘Housing Question’ in 1872.

“In reality the bourgeoisie has only one method of solving the housing question after its fashion— that is to say, of solving it in such a way that the solution continually reproduces the question anew. This method is called "Haussmann"… By "Haussmann" I mean the practice which has now become general of making breaches in the working class quarters of our big towns, and particularly in those which are centrally situated, quite apart from whether this is done from considerations of public health and for beautifying the town, or owing to the demand for big centrally situated business premises, or owing to traffic requirements, such as the laying down of railways, streets, etc. No matter how different the reasons may be, the result is everywhere the same: the scandalous alleys and lanes disappear to the accompaniment of lavish self-praise from the bourgeoisie on account of this tremendous success, but they appear again immediately somewhere else and often in the immediate neighborhood” (Engels, 1872 [1995]; pp. 45).
Thus, just as Marx ventured into the factory, the ‘hidden abode of production’, we must venture into London itself to understand the creation and recreation of a physical infrastructure which brought about an unprecedented system for production, exchange, and consumption but ultimately simply reproduced the patterns of accumulation we have seen in prior centuries.

“…the accumulation of capital entails the perpetual reshaping of urban spaces to match the requirements of growth in production and consumption, of expansion and transformation of labor markets, of new physical and social infrastructures, to say nothing of the imposition of new technological forms… Spatial transformations such as agglomeration, suburbanization, urban renewal, rehabilitation, and gentrification have to be understood in terms of the expansionary thrust of capital accumulation. Such transformations are wrought through the “creative destruction” of the landscapes that went before” (Harvey, 1989; pp. 250).

While all cities embark on the process of ‘creative destruction’, such as the explosion of Naples and Antwerp in the sixteenth century or the rise of the Dutch urban system of the seventeenth and eighteenth centuries, London expanded the spatial dimensions of this process far beyond its historical counterparts. For capital did not just redevelop London within the dimension of the city proper but deliberately and methodically moved outside the political control of the old city to expand the geographic basis of urban space itself.
As Clarke (1992) was able to meticulously show in her depiction of urban development in Brill Farm, by investing in the urban fringe of London, the new built environment which was to become Somers Town, upon its incorporation into the city, both reorganized the relationship between land, labor, and consumption and facilitated a new investment process in urban development which was highly profitable. It was here that capital was able to find opportunities for investment, remade the conditions of the built environment to better suit its interests, and circumvented the need for continual reinvestment of the older urban forms within the city, for a time.

This process of expansion for speculation in land and the reorganization of land and labor led to the constant expansion of urban space away from the city center and into the rural surroundings and would greatly increase the spatial dimensions of the London built area, far beyond the political boundaries of the city itself. Already, by the dawn of the nineteenth century, London would cover a geographical area more than twice the size of that which it occupied just over a century prior\textsuperscript{25} covering large portions of London County. Well before the closing of the nineteenth century, the urban sprawl of London would cross even the county line and into neighboring regions; giving rise to the idea of Greater London\textsuperscript{26}.

It was the dimensions of this new suburban form which would facilitate the expansion of London’s built environment to heights never equaled in historical capital. While the expansion of capital through suburbanization was a characteristic of almost all cities in

\textsuperscript{25} The spatial dimensions of London from seventeenth through the nineteenth century were calculated by the author based upon Brett-James’ (1935) analysis of London’s growth and maps of the period.

\textsuperscript{26} Greater London as an administrative, political, definition only arose in the 1960’s with the Greater London Authority. However, the use of this idea is quite useful in understanding the spatial dimensions of London by the end of the nineteenth century.
historical capital, that development was most often confined to the wealthiest and most powerful segments of the population which could afford the new urban forms at the fringe of the city. In Naples we saw this expansion with the rise of Spanish villas along the Chiaia, opening the western side of the city to a final round of capital expansion through high value real estate.

While London certainly had its own share of high end ‘villas’ and palatial country estates built near the city itself, their overall impact on urban development and capital expansion was negligible compared to the large scale development of middle and work-class homes. Here we see the true process of capital investment in the built environment which created massive new opportunities for land speculation and development, new conditions for consumption of materials, entertainment, and transportation under the new domestic ideology of separation between work and home, and most importantly the conditions for the spatial differentiation of class (Davidoff and Hall 1987; Thompson 1982; Olsen 1976). The London suburbs then, were the ‘Ecological Marvel’ (Rodger, 1992) of British capitalism for the perpetual investment and expansion of capital itself.

“Suburbs provided an integrated, self-sustaining capitalist mechanism in pre-1850 years, and indeed beyond, by generating custom for suppliers of building materials and furnishings, for transport operators and property developers, retailing and entertainment interests, and by providing opportunities for water and gas companies, not to mention new outlets for lenders and landlords, and the professional activities of solicitors, bankers, savings
institutions and others associated with property transactions. An ‘ecological marvel’, the suburb was a spatial device for generating income and employment opportunities and which inoculated the middle class against the hazards of the city without requiring them to relinquish their political control over it” (Rodger, 1992; 210 emphasis added).

By constantly expanding the spatial dimensions of London, capital could at once achieve its own self-expansion through the new investment opportunities which arose through the development of new communities and devalue the older urban core in areas where urban redevelopment was, as yet, still too expensive to be profitable. What Harvey describes as the “…fetishistic readings of city spaces…Fierce loyalties to this or that place within the city’s spaces (the place of community, of commodity exchange, of state symbolism, or whatever) become barriers to spatial transformation” (Harvey, 1989; pp. 250). The pre-existing urban form has not yet been devalued enough for its profitable transformation, the costs of acquiring the redeveloping the space being too from political and social, rather than simply economic, conditions of the space. Further, Rodgers argues, the devaluing of the older urban space in the city center served to accentuate the need for new urban spaces on the city’s edge. “So too, did the workings of the housing market in the city centre which itself produced externalities – contagion, overcrowding and a hostile environment generally – sufficiently repellent to encourage relocation. Yet behind these influences were the new market opportunities provided by this shift in housing preferences” (Rodger, 1992; 210).
Further, by maintaining political control over the city, the interests of capital could be maintained to ensure the costs of producing this new urban form were kept low and mostly born by the municipalities and state themselves. This would ensure the maximum returns on investment while divesting capital of the long term costs of maintaining the rapidly expanding urban form of the city itself. Thus Rodgers highlights the role of infrastructure in the political discourse between businesses and the state.

“For example, in developing the urban infrastructure by means of the various responsibilities vested in civic authorities, businessmen simultaneously advanced their own interests as roads, drainage, public order, water supply and other amenities improved the efficiency with which day-to-day manufacturing and distribution was conducted. To the business community, the costs of such infrastructural investment were largely externalized, local taxes falling less on industrial premises and disproportionately on residential property, to the increasing anguish of both middle-class ratepayers and working-class tenants (Offer 1981; Englander 1983). The concept of external economies may not have been precisely formulated by eighteenth and nineteenth-century entrepreneur, but they were acutely aware of the commercial advantage of forcing distributional and environmental costs upon the
This process of capital accumulation through urban expansion rested upon technical innovations for transportation and infrastructure which occurred throughout the period. However, the roots of capital’s ‘ecological marvel’ may have partly developed from the historical conditions of London itself in the seventeenth century. When the Great Fire of London finished tearing through the city in 1666, many plans were put forth to redevelop the old medieval city and make a new, ‘modern’ metropolis, with ordered street grids, new major north-south thoroughfares, and generally wider roads. Yet despite the great rebuilding, for which Christopher Wren is famously known for, much of these plans crumbled when faced with the task of rearranging and reorganizing the landholdings of the city. “[T]o rearrange landholdings altogether was beyond the patience of men and the expense of lawyers” (Richardson, 1995; pp. 96).

Thus, despite the Great Fire, the built environment of London had not been devalued enough to achieve the total reorganization required and make the massive new investments of capital profitable. Under this condition, many former residents of the center of London, mainly those who could afford to do so, moved to the new urban forms on the cities edge, where the creation of a new built environment did not have to overcome the remnants of the old. Even six years after the fire, it was estimated that about 3,500 properties remained empty (ibid; pp. 97).

It was during this period when the new developments of the West End and Holborn began to emerge, their orderly, spacious and hygienic designs appealing to the more
affluent city residents (ibid). The new urban form offered the proximity of London center for work, all the ‘modern’ amenities wanted in a home or office space, but the social and spatial distance from those less affluent; a new urban utopia.

“Dressed in an English architectural compromise that toned down the fastidious Italian correctness of Inigo Jones [who had designed Covent Garden square in the 1630’s], [the squares] were the single most important element in London’s development for the next 150 years. Bloomsbury Square, laid out in the early 1660s, set the standard and was, indeed, the first designed as a square. It had both the exclusivity and the convenience of smaller roads in the hinterland containing service premises. It was, as John Evelyn remarked, ‘a little town’” (ibid)

Although originating prior to the Great Fire and built for the upper crust of London elite, these new urban forms would be quickly expanded to accommodate other social and economic groups. It was Nicholas Barbon, the first real London property developer, who would move on from his association with the palatial estates of St. James Square to develop the property south of the Strand for the middle class and gentry (ibid; pp. 96-98). Here the new urban form, with all its amenities, could be bought by even someone from the middle class; their own private retreat in a rapidly growing urban space.

The London suburbs then unleashed a wave of capital investment in the built environment on a scale unlike anything which had preceded it. This development was not
isolated to London alone as throughout the nineteenth century the new form of British urbanism, combined with industrialization, and its ever expanding commercial trade, would remake the urban landscape of Britain itself.

“Between 1841 and 1901 the population of England and Wales more than doubled, rising from 15,914,148 to 32,527,843 persons. Inevitably this growth was not distributed evenly throughout the country. When the period began, the agricultural and industrial revolutions of the previous century had already made their impact on the social life of the people in the form of a great expansion of town dwelling, yet over half the population still lived in what for convenience may be loosely terms ‘rural’ as compared to ‘urban’ districts. When the period ended this proportion had fallen to about one-fifth, and it has remained more or less at this level ever since. The last fifty years or so of the nineteenth century, that is to say, were years of consolidation of a development of urbanisation in a society which fifty years before had been agrarian. Towns over 100,000 inhabitants increased from 6 in 1841 to 30 in 1901 – only London had been this large in 1801. Towns of 50,000 to 100,000 inhabitants, of which there had been 5 in 1801, increased from 22 in 1841 to 49 in 1901” (Banks, 1968; 277)
If this ‘ecological marvel’ allowed the expansion of capital while maintaining political control over the city, it came at a long-term price. Economically, this price came from the limits of spatial expansion itself and the ability of the former ‘suburbs’ – which quickly became surrounded by newer versions of themselves – to maintain and redevelop their built environment for new rounds of capital expansion. Just as capital had sidestepped the old city center, to seek investment opportunities which did not require the additional costs of overcoming the previous built environment, these ‘new’ urban forms would themselves become devalued over time and unable to attract new capital investment. Politically, this eventually created a duality between the low-taxed suburbs of the middle and upper class and the high-taxed but impoverished urban center. Socially, while the middle and gentry classes were able to spatially segregate themselves from the poor and working class sections of the city, this would also exacerbate class tensions.

“…[C]apitalist accumulation generated two crises in the urban scene. One was the deterioration of significant portions of the capital stock, to which suburbs contributed and from which cities never fully recovered; the second was the creation of increasingly homogenous inner-city neighborhoods in which working-class consciousness ultimately ran counter to capitalist interests. In these senses suburbs created inherent, through not fatal, weaknesses in the control of cities which they were designed to perpetuate” (Rodger, 1992; pp. 211).
A crisis of the built environment was steadily building throughout the period as the costs of (sub)urbanization rose, undermining the profits of British capital even as it faced rising competition from both continental Europe and the Americas. The expansion of world trade through the British Empire and unrelenting urban development of the past century were reaching their limits precisely at the same time. This was no surprise as the increasing competition between British business enterprises both in the UK-centered world-economy and in the urban core of the home state, undermined their own profitability.

More and more, the costs of maintaining the built environment of London and British urbanism generally, had been forced back upon the state, whose own ability to underwrite the expansion of capital and maintain the political and social dynamics of Britain was diminishing. This resulted in what Morris (1992), termed, an ‘end-of-century crisis’ when discussing the role of British cities to attract new capital for new round of creative destruction.

“In the capital-rich and population-rich towns and cities of Britain, the interventions of the ‘visible hand’ were in the initial stages minimal. The logic of the developing industrial and market system created the need for more intervention, and more of that intervention became identified with a local state which saw itself as the creature of local property-holders and ratepayers. This brought an end-of-century crisis as the ability of the local tax base to expand failed to keep up with the demands for finance for
intervention (Offer 1981, 283-315). There were two sorts of solution. Boundary extensions often led to bitter disputes, as low-taxed suburban municipalities sought to avoid association with larger high-taxed neighbors. The long-term solution was an increase in central government subsidies and grants in aid which began in the 1870s” (Morris, 1992; 195).

This crisis of the built environment culminated in the final decades of the nineteenth century with, for the first time in over a century, London losing ground to new emerging demographic rivals elsewhere in the world economy. This escalating tension in the built environment of British urbanism and the increasingly speculative nature of capital resulted in The Great Depression of 1873-1896, which would see rapidly increasing urban land values, even as the value of rural edges and hinterlands collapsed.

McDougall (1979) argues that it was the landed class, seeking new investment returns which initially led to rampant speculation in urban land values, stocks and other commodities because it was incapable of earning these returns from rent levels and increasing land values of its rural lands.

“From the 1880’s many landowners were investing in a range of stock exchanges securities in order to spread their assets, so as to ensure both future income and capital gains. They invested in industrial shares (e.g. the Duke or Portland), in railway and other commercial stock (e.g. the
Marques of Salisbury), and heavily in colonial and foreign government bonds and overseas railway stocks. From this period the ‘landed interest’ were some of the main exporters of capital, seeking higher returns from their capital than were available in Britain (Cairncross, 1974; Cottrell, 1975).

The diversification of assets also involved the buying of urban land and ground rents (for example the Marques of Salisbury). For was we have seen, it was during the period when the agricultural land market collapsed that urban land values escalated” (McDougall, 1979; 374).

While increasing urban land values should be seen as a sign of capital expansion, in this instance it had the exact opposite effect. As land values rose, the ability of capital to pursue the ‘creative destruction’ of the built environment actually declined. The opportunity for capital expansion in the built environment was severely curtailed precisely because the rapidly increasing costs associated with acquiring and redeveloping urban space undermined the ability to successfully extract profits from the process.

Just as Arrighi (1994) argued that there was no contradiction between the Great Depression and the continuing over expansion of production and investment during this period (Arrighi, 1994; pp. 164), so too can we understand that the rampant speculation in urban land values and continuously increasing competition from urban rivals, both domestically and internationally, combined to undermine London’s unsurpassed position
in the world economy both economically and demographically from the end of the
nineteenth century onwards. The ‘ecological marvel’ of London’s urban process was the
basis of its ability to reach unprecedented size and concentration in the world economy.
But just as it sought to overcome the limitations of the urban form in previous cities it
was ultimately caught in the contradictions of its own design, Engels’ ‘Housing
Question’ and Braudel’s ‘high tension system’, upon which it was burned.
Chapter 6:

Imperial Hierarchy and Urban Development: The Rise of Madras

The structure of the urban world distribution by British capital was not accomplished through the redevelopment and reorganization of London’s built environment alone or even through the rise of its national urban hierarchy with the emergence of Manchester, Liverpool, Birmingham, and others. For the British urban distribution would encompass both the internalized urban formation of the British nation state and the externalized urban formation of the British Empire. Thus, to fully comprehend the role of capital in reshaping the built environment we must also look beyond the borders of the Kingdom to the urban forms of the Empire.

In the revival of the Genoese-Iberian organizational structure, British capital sought not only to internalize the processes of production within its national boundary but within the territorial boundary of the Empire itself. It was precisely the revival of the cosmopolitan-imperial structure of capital which created the conditions for the internalization of production within the British regime of accumulation. By remaking the conditions for land and labor overseas and increasing the size of the world economy through imperial expansion, on which it could extract profits, the British regime was able to internalize production and supersede the previous Dutch organizational structure. The cities of the British Empire, especially those in British India, were the sentinels of the imperial expansion of the world economy.

Thus, the built environment of British imperial cities had to be (re)made by capital to facilitate the new structure of capital itself. Just as Naples was remade by the imperial
interests of the Argonese crown and the cosmopolitan capital of the Genoese merchants, so too the cities of British India were subjected to the new forces of urbanization and organization of the eighteenth and nineteenth century. However, with Naples, the source of capital had come from two distinct sources; one for protection, to remake the military complex and fortifications and one for expansion, to remake the commercial and financial interests. In the new scale and complexity of the world economy under British capital, these forces were united within the British Empire so that it was British capital alone performing both roles.

However, it was British cosmopolitan capital which led the way to urban redevelopment which was then reinforced by imperial protection when needed, as opposed to the imperial protection which led the way in Naples followed by the cosmopolitan capital of northern Italy. To illustrate the coalescing nature of urban development in the nineteenth century we can compare two discrete urban formations and their convergence under the British regime of accumulation. The cities of Madras and Cairo, with very distinctive historical, economic, and spatial relationships to one another and which were incorporated into the world economy of British capital at antipodal points in the trajectory of the British regime of accumulation. However, by the end of the nineteenth century, both cities would see their built environment and their place in the world distribution of cities become nearly mirror images of one another as both cities were fully embedded in the British Empire and both centers reached populations of close to or beyond 500,000 inhabitants.27

27 Madras reached a population of 400k by 1871 and would increase by more than 100k in just 30 years to a population of 509k inhabitants by 1901 (Lewandowski, 1975). Cairo only reached a population of 375k
The comparison of these two urban spaces allows us to see the role and influence of British cosmopolitan capital and imperial endeavors on cities that had little to no relationship with one another prior to their incorporation into the world economy under British capital. Their convergent trajectories from distinct histories illuminates the power and influence of capital reorganization of the built environment.

The role of British capital in the urbanization and urban (re)development of India began in the seventeenth century and expanded to encompass the entire spatial dimension of the Subcontinent by the nineteenth century. During this period many cities saw their trajectories change markedly as the new organizational structure of land and labor for the accumulation of capital became dominant within the Subcontinent. As discussed previously, the former largest cities in the region such as Hyderabad, Dehli, and Murshidabad stagnated and even declined under British imperial rule as their built environment was either remade to facilitate the new process of capital accumulation or devalued conditions of development they once enjoyed became obsolete. While the cities of Bombay, Calcutta, and Madras experienced demographic explosions as they became centers of both British commercial capital and governmental control to facilitate the extraction of ever greater surplus value from the Subcontinent.

In this section, we will focus on one particular center, Madras, for its unique ability to highlight the role and influence of the British regime. From its inception in the seventeenth century as a merchant outpost in the vein of Dutch mercantilism, the city of

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by the 1882 census, somewhat smaller than Madras at the time, but would dramatically increase its population to 570k just 5 years later and reach 654k inhabitants by the 1907 census; an increase of nearly 300k inhabitants in 25 years. (Chaichian, 1988).
Madras would expand so rapidly that by the nineteenth century it would be one of the largest cities in the world.

Madras was the earliest colonial port city established in India by the British that had no previous settlement history (Lewandowski, 1975). Thus, unlike major urban centers in India such as Delhi, Lucknow or Ahmedabad, which had a political, economic, and social history to their development prior to British imperial domination, the built environment of Madras and its corresponding growth and relationship to the world-economy was almost entirely determined by British capital and control. Thus, the built environment which we can view from the city’s foundation through the nineteenth century was unencumbered by a predetermined usage; a true environment built solely for the pursuit of capital expansion and imperial domination on the subcontinent. “[I]ts morphological and spatial patterns were dictated by the presence of a western population which at first was exclusively trade-oriented, but over the centuries became involved in banking, business and administration” (Lewandowski, 1975; pp. 341).

While no urban development in India can be understood out of the context of the expanding world-economy of the eighteenth and nineteenth centuries, the development of urban centers which had no pre-colonial historical conditions to their foundation reinforces the argument that their relative success was a product of their incorporation into the world system of European capitalism rather than the historical conditions of Indian urban development itself.

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28 Although the British development of Fort St, George was established where no previous built environment had existed, as the city of Madras developed outside the original trading fort it incorporated surrounding villages whose spatial organization and development structure had historical conditions which were modified by the hegemonic presence of British urban development and political control.
“It goes without saying that colonial rulers brought to urban development in India certain features which were inherited from the historical evolution of cities in the metropolis. At the same time it has to be borne in mind that such features were inescapable insofar as colonial rule drew various urban centers in India into a network of capitalist relations” (Farooqui, 1996; pp. 2746).

Madras is also unique in its development in comparison to other urban centers established in British India. While Bombay and Calcutta developed an industrial base in textiles and jute factories, Madras never established or attempted to develop an industrial base of any size itself. Rather the city was developed as a center of trade, political control, education, commercial and banking operations for South India (Lewandowski, 1975). A built environment centered on imperial control rather than the exploitation of cheap labor through industrial development. This makes Madras distinct, a city whose development and demographic expansion were based solely on the role of British dominion in South Asia. Thus, the city itself is a unique spatial form for understanding the political and social role of British hegemony in the urban world-economy, disarticulated from the Industrial Revolution of British capital production and exploitation of factory labor.

Madras, more than any other imperial city in British India represented the “microcosm of the larger colonial empire [and] …did not stand alone as the center of its own universe, but was linked to a series of other satellite cities, and ultimately subordinate to the foreign capital on which it depended for its existence” (Lewandowski, 1977; pp. 196). Its built environment and the corresponding demographic expansion to become the third largest
city in the Subcontinent was a direct project of British cosmopolitan capital and imperial dominion in the economic and political reorganization of India itself.

The decision by the East India Trading Company (EIC) in 1639 to establish Fort St. George was based upon two important conditions; cloth production and shipping. The already established presence of cloth producing centers in the villages of southern India was important for the British trade. Cloth produced in the region could be used to trade for spices and other goods from Java, which in turn could be then resold in Europe for significant profits. This trade in cloth and spices depended on British shipping and the deeper waters off the coast at Madras allowed ships to transfer goods closer to shore than most other locations in south India. “Within a few decades Madras became an important emporium of trade. Goods were carried to Madras from China and the Malay Archipelago where they were sorted and repacked before being shipped to Europe” (Lesandowski, 1977; pp. 199).

During the seventeenth century, Madras was made a Presidency subordinating all English settlements in Bengal and the Coromandel Coast to its direction and established a stable population of some 50,000 inhabitants. Even the Fort St. George Gazette noted the demographic explosion in Madras in 1687 by stating, “…even this is an immense number to be collected in forty-seven years in connexion with a trade that never at that period amounted to more than six ships per annum” (quoted in Lewandowski, 1975; pp. 347).

29 By 1880 British Madras, with approximately 400k inhabitants, was approximately the same size as Chicago in the United States and was larger than many European cities including Madrid, Lyon, and Amsterdam. It was also nearly 5 times larger than the second largest city in all of South India, Trichinopoly, according to the 1891 Census of India (Lewandowski, 1975; pp. 343).

30 It is most likely the village of Madrasapatam, which both specialized in cloth production prior to the British arrival and was located to the north of Fort St. George, from which the city would eventually develop its name.
Possibly even more important was the large presence of British and Europeans who resided and conducted business at the city.

In Northern Indian cities, the European presence was maintained in compact residential areas known as Civil Lines (Breese, 1966) and was clearly demarcated by formal street patterns and house plots. In contrast, once the external threat of attack was removed from Madras, the European residents rapidly spread out from the old city center, establishing and controlling large tracts of land which would later be incorporated into the city in the nineteenth century (Lewandowski, 1975).

“In the eighteenth and early nineteenth centuries, the Europeans set the pace for the movement from the urban center to the outlying districts of Madras by establishing garden houses as symbols of their newly acquired wealth… As the century wore on, South Indians employed in the professions began moving into already established garden houses or dividing up the land owned by Europeans, thus sustaining the garden house pattern with smaller residential plots” (Lewandowski, 1975; pp. 354-355).

The overall European population in Madras was also quite substantial compared to most other centers of trade established by the EIC. This was partly due to the role Madras played as a Presidency in the EIC and its role as a trade emporium between London and East Asia. However, this was also partly due to the presence of other European merchants who were deliberately attracted to Madras by the EIC. Specifically, Madras held a
relatively large Portuguese trading population which had been attracted to Madras by offers of better commercial facilities, a thirty-year tax exemption, and protection. By the late seventeenth century a large Armenian population of traders was also established, brought by offers of contract for use of Company shipping and religious freedom. This had the effect of increasing the population of the city but much more importantly, it increased the mobile capital of its merchants as British, Portuguese, and Armenian capital was flowing through the city in commercial exchanges (Lewandowski, 1977).

As the commercial expansion of the city continued through the eighteenth century, the city expanded incorporating both previously settled villages and annexing undeveloped space. New urban developments, such as the village of Chintadripet and Washermanpet, were the direct consequence of British cosmopolitan capital. Respectively founded as colonies for weaving and for the bleaching of cloth (Lewandowski, 1975 & 1977), these urban spaces were the direct development of British capital to define a built environment and a relationship between land and labor which could be exploited for the expansion of capital through the export trade to Europe. The need for ready access to cloth close to the commercial center of British interests in southern India made the acquisition and development of new land within Madras itself profitable for the pursuit of manufacturing and export.

Previously settled areas were also incorporated into the city as it expanded. The acquisition of land with a pre-existing political and economic structure encumbered the reorganization of land and labor for purely economic profit and therefore was done for larger political and social goals by the company. In the case of Triplicane, a Vaishnava pilgrimage center since the eighth century, “…the British encouraged the Muslim ruler,
the Nawab of Arcot, to settle near the village, Triplicane with its predominantly Hindu population developed a substantial Muslim enclave of Urdu-speaking migrants who moved south to Madras from Arcot, the Nawab’s former capital. Subsequently Triplicane became an important subsidiary market center for Madras” (Lewandowski, 1975; pp. 348).

In such ways, the urban form of the pre-established village was devalued through the political realignment of the areas religious groups and ultimately served as both a way to attract new sources of labor to Madras itself and ensure the direct political control and subordination of both the Hindu and Muslim populations locally to British power.  

Madras may have been originally developed as a port for textiles and the re-export of trade from the East, however, by the eighteenth and nineteenth centuries the city assumed multiple additional roles, as a center of politics and social and cultural development, dominating a massive territory in southern India. While many East India urban spaces took on these additional roles as centers of political and social control, in no place was this more apparent than in Madras. Prior to 1750 the development of the city had been limited by foreign and domestic threats of violence and needed the strong defenses of the fort itself.

After 1770, with the defeat of the French and the emerging dominance of the British Empire, the role and function of the built environment of Madras rapidly changed. No longer bound by the need for protection from the fort directly, the European community began rapidly moving out of the older fort area and into the surrounding villages which had been acquired by the EIC, building new communities of garden houses and other
symbols of their wealth and power in the city and its suburbs (Lewandowski, 1975 and 1977). More importantly, the city of Madras took on a massive new role as the political and commercial center of southern India as the full manifestation of the revived imperial organizational strategy of British capitalism came to fruition.

“As the British shifted from their role as traders to rulers of the Indian Subcontinent, they added a new dimension to the cities they created – a municipal apparatus to monitor urban growth, to regulate the use of land, and to insure that certain areas, especially those where they resided, would receive adequate urban facilities… [T]he economic dynamic for the growth of Madras was the development of the administrative and service sectors… The growing attraction of Madras as the colonial capital of the South was clearly reflected in changes in the overall size of the city” (Lewandowski, 1975; pp. 341-342).

It was its role as a political and administrative center, a sentinel of British power and authority in the world economy, which ultimately generated the historical conditions for the city’s expansion and development. “The city did not stand alone as the center of its own universe, but was linked to a series of other satellite cities, and ultimately subordinate to the foreign capital on which it depended for its existence” (Lewandowski, 1977; pp. 196). The concentration of commercial, administrative, and political institutions into select built environments facilitated the efficient oversight and organization of colonial domination for the expansion of capital; Madras greatly
benefited from this strategy of urban concentration and hierarchical organization of British urbanization in the nineteenth century.

From the beginning reorganization of the world economy, especially with the removal of the French threat after 1770, to the signal crisis of British hegemony, Madras would go from a relatively modest British outpost of some 55k inhabitants to become one of the largest cities in the world with upwards of 400k inhabitants; an increase of over 7 times its original size. It was a city built to project British power and control and ultimately a city subject to the interests of capital organization in the world economy and the built environment. Although the city would not suffer a demographic decline with the waning of British capital, its demographic expansion would markedly slow to such an extent that only 20 years later, in 1900, the city would no longer rank among the world’s largest cities.
Section 6.2:

Imperial Hierarchy and Urban Development: The Return of Cairo

Outside of the explicit urban reorganization of the Subcontinent, many other urban centers experienced changing fortunes as the structure and organization of the world economy of British capital altered the conditions under which cities operated. One of the most notable of these was Cairo. A former imperial city in its own right, the city had once been the largest city in the world economy of Venetian capital in the fifteenth century; only to be supplanted by the imperial endeavors of the Ottoman Empire which shifted the Mediterranean trade to its new capital of Istanbul in the sixteenth century. A built environment which retained the vestiges of capital accumulation, empire, and state power over a far longer period than London or even its new imperial master, Istanbul, the city of Cairo would remain a second city, subjugated to the interests and organization of Ottoman rule for the next two centuries. Under the declining power of empire, the city would be slowly bled dry as the world economy moved from the Mediterranean to the Atlantic under the influence of the decentralized Dutch metropolis\(^\text{31}\).

However, with the crisis of Dutch hegemony in the eighteenth century, Cairo would experience the benefits and detriments of its relationship to the newly expanded and reorganized world economy of British capital. While overall the city would double its population between 1750 and 1880, it would remain demographically stagnant under Ottoman and the short-lived French domination at then close of the eighteenth century. Only once Egypt achieved relative national independence in the nineteenth century and

\(^{31}\) During this period the city of Cairo is estimated to have fallen from a high of possibly 450k inhabitants in the fifteenth century to only some 175k inhabitants by 1750 (Chandler, 1987; pp, 266).
moved to become embedded in the new world economy of British Capitalism did Cairo begin to grow again.

It was thus in the relatively short historical period from 1805 to 1882 – that is, from the successful campaign by the Albania commander, Muhammed Ali Pasha, to establish a somewhat autonomous independent Egyptian state, until the full incorporation of Egypt into the British Empire in 1882 – that the city of Cairo would first explode back into the upper echelons of the global urban distribution. By 1882 the city would far surpass the historical limits of population it had achieved four centuries prior under the new organizational strategy of capital accumulation. However, the city would ultimately fail to retain its position among the largest cities in the world distribution at the dawn of the twentieth century\textsuperscript{32}. Thus, Cairo’s dynamic rise in the urban hierarchy would be even more fleeting than its imperial brethren, Madras, as the built environment of the city failed to keep pace with the changing structure and organization of capital accumulation following the signal crisis of British hegemony.

The titanic shifts in Egypt’s urban demographics are highly correlated to its changing position and incorporation with the new organization of the world economy to British capital and its independence from the constraints of Ottoman economic and political organization. Internally and externally, the reorganization of Egypt’s urban centers was being driven, economically and politically, by the twin dynamics of declining trade with the eastern Mediterranean, as regional trade with the remnants of the Ottoman Empire in

\textsuperscript{32} During the period of approximately 80 years (1805-1882), the population of Cairo would nearly double from 186k inhabitants to over 375k inhabitants (Chandler, 1987; pp.266 and Chaichian, 1988; pp. 26 respectively). From the first British census of 1882 to the census of 1897, after just 5 years of British rule, the city population would increase by a further 65 percent to 570k inhabitants (590k inhabitants according to Abu-Lughod, 1965) but would then slow markedly leading into the early twentieth century (Chaichian, 1988; pp. 26).
Syria, Greece, and Anatolia declined precipitously, and by rapidly increasing trade with Europe, especially in the role of cotton exportation to Britain\textsuperscript{33} (Chaichian, 1988).

Thus, during the first half of the nineteenth century, urbanization in Egypt increased rapidly under the new independent government. While the overall population of Egypt only increased by .4 percent between 1821 and 1846, Egyptian urbanization saw much larger growth rates such that “…Alexandria, Damietta, Tanta, Rosetta, and Suez had annual growth rates of 10.3, 4.0, 2.6, 1.2, and 1.4 percent, respectively” (Chaichian, 1988; pp. 25). According to Issawi (1969), this dynamic growth in certain urban spaces reflected the changing orientation of the Egyptian economy towards exports as it emerged from Ottoman control. ”[T]he economy began to be oriented outwards, toward the export of its primary products, that transport was developed accordingly, with railway lines or steam-boat services pointing to the coasts, and that the alignment of towns shifted in consequence” (quoted in Chaichian, 1998; pp. 25).

“Thus, the main structural change was a shift from the more or less decentralized mode of appropriation of taxes/tributes during the Mamluk's reign to Muhammad 'Ali's centralized government, which sought to improve agricultural production (especially cotton) for export to the ready European markets from 1821 onward. This meant that employment opportunities in the primary sector were sufficient to absorb the rural work force, which was still

\textsuperscript{33} Long-staple cotton was introduced to Egypt in 1820 and quickly became a central cash crop in the Egyptian economy.
tied to the land by traditional bonds. On the other hand, production of cash crops for export enhanced the growth of port cities like Alexandria, which served as the main port for foreign trade. In fact, Alexandria's growth was one of the main reasons for Egypt's increase in urban population. The diversion of long-distance trade routes from the Mediterranean to the Atlantic bypassed many inland cities. At the same time, concentration of trade activities in Alexandria marked the beginning of a new era of dependent economic relations between Egypt and the European market. For instance, Rosetta, once the main port of foreign trade in the western Delta, suffered from its commercial activities being transferred to Alexandria. Furthermore, the growth of Damietta (the only port in the eastern Delta) was impeded by a substantial decrease in the regional trade between Egypt, Greece, and Syria (Baer 1969:137-38)” (Chaichian, 1988; pp. 27).

During this time period Cairo itself only experienced modest growth, from an estimated 175,000 inhabitants in 1805 to 257,000 inhabitants in 1846; a growth rate of only .65 percent per year, or just .25 percent greater than the general increase of the total Egyptian population (Chaichian, 1988). Despite reclaiming its title as the capital of Egypt and throwing off its second tier status to Istanbul, dramatic urban growth came to its port cities, primarily Alexandria, and not to its political and administrative center in Cairo.
In the second half of the nineteenth century, from 1846 to 1897, the reorientation of the Egyptian economy to serve European interests, especially the interests of British capital, was fully undertaken and completed. In just 50 years the restrictions on the ownership of land, the rights to both sell and mortgage property, in general and by foreigners in particular, were removed. This facilitated the concentration of land ownership, backed by foreign capital, and the ability to focus on export production, rather than internal consumption. This allowed cotton cultivation to be rapidly intensified to satiate the growing demands of European business, especially British textile factories, with the collapse of American cotton exports during the U.S. Civil War (Chaichian, 1988).

“In 1847 Egypt was still a semi-autonomous member of the Ottoman Empire, ruled in eastern fashion by an easterner. Westerners were still barely suffered, despite the handful of trusted advisors retained by the Pasha. By 1897, although still nominally within the Ottoman fold, Egypt had been governed by a representative of the British government for some fifteen years. European nationals monopolized the important government posts and enjoyed privileges and exemptions and a style of life that made them the envy not only of Egyptians but of their countrymen at home as well. In 1847 Europe and Egypt were first becoming acquainted, the first transportation links were being forged, and trade had barely begun. By 1897 the destinies of Egypt and
Europe had become inextricably intertwined” (Abu-Lughod, 1965; pp. 431)

It was during this period that Cairo’s population growth rate began to rise, first with some 120,000 additional inhabitants moving to Cairo by 1882 and by 1897 this became a flood with an additional 200,000 inhabitants having swelled the size of Cairo, of which an estimated 30,000 of them were European foreigners (Chaichian, 1988; Abu-Lughod, 1965). This explosive growth of the urban population, for the first time centered on Cairo, rather than the port city of Alexandria, was driven by several interrelated factors.

First was the rural displacement from cotton and the rapidly rising interest of European businesses in the private economy. As has been repeated many times over in the development of capital, workers were both pushed off their land and thus sought refuge in the city and were attracted to urban centers by the possibility of work in industry. Thus by 1880, Egypt’s cotton production accounted for 71 percent of the total value of exports of 22 million Egyptian pounds\(^{34}\) and the industrial labor force came to constitute a small but significant portion of the total population\(^{35}\).

Second, and ultimately more important, was the role of Cairo on the international stage with the development of the Suez Canal and the mounting national debt which was incurred by the government from various projects like the canals, railways, and the development of modern utilities. Various scholars have argued the importance of each of

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\(^{34}\) It is estimated that Egypt’s cotton production increased more than six times from 1860 to 1879; from 501,000 qantars to 3.124 million qantars and indicate the development of a “one-crop economy” (Chaichian, 1988; pp. 28).

\(^{35}\) Estimates of the industrial labor force in Egypt vary widely from a low of 15,000 to a high of 260,000 but most likely fell in the range of 60,000 to 70,000 or roughly 6 to 7 percent of the total Egyptian population (Mabro and Radwan, 1976; Chaichian, 1988).
these elements separately. Abu-Lughod argues that it was the canal itself which became the most important event for the eventual occupation of Egypt by Britain;

“Ratification by the Porte and completion of the canal did not occur until years after Sa'id's death, and yet to him must be assigned responsibility for this single most important event of nineteenth-century Egypt - an event that altered the entire future of the country and, with it, that of the capital city of Cairo. The canal thrust Egypt to the center of the world's strategic stage, a position she had not occupied since the fifteenth century. But it also enmeshed her in the rivalries and machinations of the Empire builders and led eventually to British occupation and the growth of "colonial" Cairo” (Abu-Lughod, 1965b; pp. 435)

Chaichian (1988) and Hopkins (1986), in contrast, place the emphasis more on the role of financial interests and maintaining the balance of payments from Egypt to France and especially Britain. Arguing that, as the Egyptian Khedive’s undertook massive modernization projects of industries, railways, the Suez Canal, the Nile canals and ports, and urban infrastructure such as the creation and development of the Cairo Water Company and the Cairo Gas Company, the Egyptian government accumulated large amounts of debt primarily to the two European financial powers of London and Paris.

“According to Crouchley (1936:16; 1938:117), during Isma'il Pasha's reign alone (1863-1878) about LE 40
million were spent in improvement of the infrastructure such as railways, the Suez Canal, the Nile canals, ports, etc. A high proportion of these expenditures came from foreign investment and loans often on highly unfavorable terms. Barbour (1972:45) puts the borrowed money for the 1862-1873 period at about LE 68,500,000. This was followed by the strengthening of the financial link that bound Egypt to the world capitalist system. According to Crouchley (1936:29-37), a spectacular growth of banking activity started in the 1850s. By 1877 eight banks provided telegraph exchange in Paris and London and two foreign mortgage banks were opened in 1880” (Chaichian, 1988; pp. 28).

The increasing indebtedness and financial subservience of the Egyptian government to British and French capital pushed the country into crisis. Well before the British invasion of 1882, British and French officials and bankers had begun to dictate financial policy in Egypt. From the reduction of the Egyptian army to reduce costs, which ironically led to the rise of a nationalist movement under the direction of Urabi and the Egyptian colonels who had been dismissed from their positions in the Army, to government control by British and French technocrats to oversee taxation and debt payments both before but especially after the bankruptcy in 1876; the Khedive and Egypt itself had already become a European colony in all but name only (Galbraith and al-Sayyid-Marsot, 1978; Hopkins, 1986; Chaichian, 1988). By 1881 it was estimated that there were some 1,300 foreign
functionaries in the Egyptian government earning exorbitant salaries (Galbraith and al-Sayyid-Marsot, 1978)\textsuperscript{36}.

Both of these interests are joined in the political and economic interests of European, especially British, powers. Thus Galbraith can ask;

“Was intervention motivated by the demands of British industry, that is, by economic considerations? Some historians have argued this line despite the fact that Egypt was already open to British trade. The proponents of the 'bondholders' school have no common ground with the 'Suez Canal' forces, and vice versa. Each, as is invariably the case in such historians' debates, presents arguments convincing to themselves” (Galbraith and al-Sayyid-Marsot, 1978; pp. 471).

Whether real or perceived threats to the Suez Canal or the deteriorating financial position of the Egyptian government or some combination of the two, these political and financial crises finally led to the British invasion of Egypt in 1882 and its full incorporation into the Empire and cosmopolitan-imperial strategy of accumulation. Although Egypt had already been thoroughly embedded in the world economy of British capitalism prior to

\textsuperscript{36} The issues of the nationalist movement which was thought to threaten European control over taxation in Egypt and the salaries of foreign functionaries in the government are not unrelated. When the Assembly of 1881 drafted a proposal to increase the size of the army back to 18,000 men, to appease the leaders of the nationalist movement, the additional cost of 280,000 Egyptian Pounds was to be accomplished through the dismissal of Europeans in the government. This was viewed as a threat to British and French interests in the security of the debt-liquidation system established after 1876, as European functionaries would no longer have control over the assessment, imposition, and collection of taxes in the Egyptian government (Galbraith and al-Sayyid-Marsot, 1978; pp. 473-475).
1880, it was only after Egypt became a direct component of the British Empire that Cairo’s steady population growth became a deluge. As previously stated, between 1882 and 1897, under just 15 years of direct British rule, Cairo’s population would reach nearly 600k inhabitants\(^\text{37}\), representing a growth rate of more than 12.5 percent per year for the period. As impressive was the dramatic rise in the number of European foreigners who came to live and work in Egypt. The presence of foreigners in the Egyptian population has been estimated to have increased from only some 3k in 1836 to over 68k in 1878. However, by 1897, Chaichian estimates that foreigners alone comprised 16 percent of Cairo’s population, or possibly more than 100k inhabitants in the city (Chaichian, 1988; pp. 29-32)\(^\text{38}\).

Like its predecessor in Madras, the reorientation of Cairo to serve the political and social interests of British capital was fully undertaken and its position in both the world distribution of urban centers and within its own national distribution changed dramatically. The dramatic growth of Cairo and Alexandria had propelled Egypt into a dynamic hierarchical urban organization closely mirroring the urban organization of its new master, the Kingdom of Great Britain but more directly reflecting the colonial domination of an imperial strategy of accumulation. Thus, Chaichian notes;

“One of the dominant and common features of colonial domination is the concentration of commercial,

\(^{37}\) Chaichian (1988) puts the population at 570k according to the 1897 census. Abu-Lughod (1965a) puts the population slightly higher at 590k inhabitants based on the reestimates of the population by the 1947 census.

\(^{38}\) Abu-Lughod puts the estimated number of foreigners potentially much lower arguing that by backward extrapolation the foreign population of Cairo “exceeded 30,000” (Abu-Lughod, 1965b; pp. 431). However, even if we take the foreign population as being only 30,000, this would still represent about 5 percent of the population of one of the largest cities in the world economy at that time.
administrative, and political institutions in a few localities for the purpose of reducing the costs of running the colony. Egypt was no exception and Cairo became the center of the British colonial administration. The growing need for numerous services attracted rural immigrants into Cairo. In addition, the number of government officials, servants, building and transport workers, petty traders, and members of similar occupations rose considerably” (Chaichian, 1988; pp. 30).

The built environment of Cairo, whose (re)development had already begun under the Khedive’s in the decades prior is transformed as the new relations of land and labor take hold in the city. The spatial expansion of the city to new land on its borders and the reclamation of land which had been previously abandoned upon its decline in the fifteenth century enabled the ‘new’ city to be transformed into a quasi-European paradise and facilitate the expansion of capital in the new round of urban development. “During the latter half of the nineteenth century Cairo again widened to encompass a third band beyond the western limit of the city, edging towards but not quite reaching the river's bank. This new strip included portions that had been developed in the fourteenth century but which had long since reverted to raw state (Abu-Lughod, 1965a; pp. 432)

Thus by the end of the nineteenth century, Cairo has been transformed into two cities; one serving the expansion of capital in the built environment and the political and social desires of the European, especially British interests, and the other the devalued former
urban space of the traditional city. By 1889 an English observer, William Fullerton, could comment on the ‘new’ urban space of Cairo saying;

“…with the polo, the balls, the races, and the riding, Cairo begins to impress itself upon you as an English town in which any quantity of novel oriental sights are kept for the aesthetic satisfaction of the inhabitants, much as the proprietor of a country place keeps a game preserve or deer park for his own amusement” (William Morton Fullerton quoted in Abu-Lughod, 1965b; pp. 430)

While the older urban space of Cairo has been devalued to such an extent that much of the older urban social and economic functions have been eliminated or drastically reduced. The older sections of eastern Cairo were ignored in the influx of capital investment from Europe. Its older social relations no longer conducive to reinvestment for capital expansion until their spatial condition within the city was devalued enough to be profitable for redevelopment. Thus the British Consul General in 1905 can report;

“The difference is apparent to any man whose recollection goes back some ten or fifteen years. Some quarters of Cairo that formerly used to be veritable centers of varied industries-spinning, weaving, ribbon making, dyeing, tent making, embroidery, shoe making, jewelry making, spice grinding, copper work, the manufacture of bottles out of animals skins, saddlery, locksmithing in wood and metal,
etc., have shrunk considerably or completely vanished. Now there are coffee houses and European novelty shops where once there were prosperous workshops (cf. Abdel-Malek1 968:8)” (quoted in Chaichian, 1988; pp.31-32).

By 1897 only two cities in Egypt had more than 100,000 people; Cairo and Alexandria. These two major urban centers comprised 64.9 percent of the total urban population in the country; Cairo alone had nearly 25 percent more inhabitants that every other urban space in Egypt, excluding Alexandria, combined (Abu-Lughod, 1965a; Table 3) and sat atop of a pronounced urban hierarchy distribution within the state. This has led Abu-Lughod, like Berry and Portes before her, to comment on the imbalanced nature of Egyptian urbanization based on the expected rank-size distribution of Zipf’s Law.

“The urban constellations in many highly developed industrial nations and regions actually conform to the numerical relationship expressed by [Zipf’s Law]. However, when it is applied to the Egyptian distribution, major discrepancies and an over-all deficit in the sizes of the secondary cities become evident. This deficit between "expected" and "observed" size is most extreme for the third- to fifth-ranking cities, dramatically reflecting the gap in city-size distribution noted between Alexandria and the Canal Zone cities…
Thus, the gap between the largest two cities and the urban communities of secondary importance stands out as a basic imbalance in the urbanization picture of Egypt and as a critical symptom of immature development. This point needs little further clarification, especially to anyone who has travelled or lived beyond the protective confines of Cairo or Alexandria. Such a reader has observed the marked contrast between the two centers of urban life and the provincial, quasi-urban communities of secondary size. It is sufficient to note here that Egyptian cities, rather than progressing gradually from the largest to the smallest and from the most "urban" to the most bucolic, leap in size from one modal type to another, this size leap being reflected in the quality of urbanism as well as in its quantity” (Abu-Lughod, 1965a; pp. 326).

However, we can now understand Egyptian urbanization in the nineteenth century, not as the generation of urban balance but the explicit generation of urban imbalance as the extensive regime of accumulation of British capital reorganized and redeveloped the built environment of Egypt. The incorporation of Egypt into the expanding spatial dimensions of the British world economy specifically generated the need for concentration. The concentration of urban space into key localities to facilitate the incorporation of regions and material into the world economy, the development of Egypt as a predominantly mono-crop export-oriented economy and commercial throughway for goods and material
in the Suez Canal, and then the concentration of administrative, political, and financial institutions which reduced the costs of direct political and economic control.
Section 6.3:  

Imperial Urbanization in Macro Perspective

Just as the United Kingdom itself was hierarchically organized to facilitate the commercial and political workings of the British regime of accumulation and the Subcontinent of India had been reorganized and (re)developed over centuries under the extension of British power and rule; so too had Egypt become subjected to the organization strategy of accumulation as a component of and eventually servant for the continued expansion of British capital. The Egyptian urban distribution at the end of the nineteenth century was not ‘imbalanced’ anymore than the Kingdom of Great Britain or Naples and the Italian cities three centuries prior. The spatial dimensions of urban development and the strategy of accumulation by the cosmopolitan-imperial regime were one and the same.

Madras, a symbol of British urban development in India would experience explosive growth as one of the fastest growing urban centers of the eighteenth and nineteenth century. During this period, the city would move from a small transit point for goods moving between Europe and East Asia to become one of the largest cities in India and the entire world; first through the British East India Company and its ability to finance trade, troops, and everything in between and later by the British government itself, when the British Crown took formal control over India. Urbanization in India would become personified by key urban spaces, developed and organized to facilitate British capital accumulation and reinforcing the hierarchical ordering of the urban distribution of the world economy.
Cairo would achieve the dynamic of Madras but in many ways looks significantly different. While Madras was developed solely under the direction and influence of British capital, Cairo had a preexisting built environment with a long political, economic, and social history which had to be overcome to achieve the new dimensions of complexity and scale for capital accumulation.

Ultimately both cities would become sentinels in the urban distribution of the British world economy, a demographic convergence despite their local historical differences. Just as markedly, neither city would retain its position among the world’s largest cities for very long and while ultimately remaining as leading urban centers in their local urban distributions, both would see their growth rates decline precipitously at the dawn of the twentieth century. Their dynamic growth, profiting as centers of British cosmopolitan-imperial capital in the nineteenth century, was just as quickly curtailed by the crisis of the British regime of accumulation in the twentieth century.

The intertwined strategies of British capital and its associated urban development were part of reinforcing system of the internal, national, British urban form and the external, imperial, British colonial-city. As the British regime of accumulation extended itself into Asia with the development of trading posts and imperial centers, the needs of the British entrepôt, London, were enhanced. As London’s needs for Asian imports, shipping, protection, and production increased, so too did the demand for an expanded British imperial domain to find and develop markets to operate through and justify the reinvestment of capital itself, thus expanding the function and importance of the British imperial urban form.
Thus, long before the British regime of accumulation came to dominate historical capital and replace the Dutch Republic and Amsterdam, this intertwining of capital investment and urban formation was recognized in the rise and development of the British East India Company by Chaudhuri (1965).

“In twenty years since its foundation in 1600, the Company had established more than a dozen trading stations in Asia employing upwards two hundred factors. It had set up two shipyards on the Thames, built a total of 76 ships, and become one of the largest employers of labour in the London area” (Chaudhuri, 1965; pp. 21).

The urban development of London and its corresponding expansion both demographically and economically, was supported by a strategy that originally mimicked the Dutch policy of outposts but from which “…came the ‘continental inland expansion’ of the next two centuries (Knowles 1928: 9-15) and the incorporation in the British-centered capitalist world-economy of the continents of America, India, Australia, and Africa” (Arrighi, 1994; pp. 199). A process of imperial expansion which would only enhance the form and function of the great British metropolis for trade, production, commerce, banking, and ultimately direct governance.

Just as in the British state had achieved a new level of urbanization in England through production and consumption, the (re)development of the imperial cities of British Empire fundamentally changed the urban patterns in India, Africa, and America. However, unlike previous organizational strategies, the direct impact of the new urban world was felt far
beyond the limitations of one or two urban centers. Previous regimes were incapable of directly controlling numerous major urban centers. Instead, the British regime reoriented the world urban distribution towards a profoundly hierarchical organizational structure, centered on London, where British urbanism, both internal and external, accounted for 8 of the 25 largest cities in the world economy by 1880.
Chapter 7: The American City-System:

The Dialectic of Urbanization in Comparative Perspective

Our central distinction is not between core and peripheral countries in the world economy but between systemic cycles of accumulation, i.e. between the ninenteenth century British-led world system and the twentieth century U.S.-led world system. Therefore, differences in urbanization of the world economy are the central critique to understanding the distribution of cities which emerged in the twentieth century and gave rise to the steady state distribution of Zipf’s Law.

The city of London and the urban development of the British world economy reached an unparalleled level of hierarchical organization in 1880. London itself, as the economic, political, and social lynchpin of the both the nation state of the Kingdom of Great Britain and the empire of British imperialism, was nearly twice as large as its nearest demographic rival, Paris. With over 4.2 million people it was also 12 times as large as the 25th largest city in the urban distribution, Cairo. Cairo itself was already well under the influence of British dominance and the interests of British capital and had grown rapidly under this influence since 1850\(^3^9\). It was of course further subjected to formal British rule just two years later when the British occupied Egypt under Lord Cromer to assure its adherence to British capital and the interests of the City (Chaichian, 1988; Osman, 2011).

As we seen earlier, the dominance of London and the influence of the cosmopolitan-imperial regime of accumulation under the British state had reached its zenith in 1880,

\(^3^9\) Although Cairo had been one of the 25 largest cities in the world in 1800, it had been overshadowed by the rise of other cities in the world economy and thus only returned, briefly, to the urban distribution in 1880 under the influence of British capital itself which facilitated investment and expansion in the built environment of the city.
restructuring and reorganizing the urban distribution of the world economy, far beyond the limitations reached under the Dutch Republic or the predecessors of historical capital. But this same unbridled expansion which had fueled the rise of the metropolis and the reorganization of the urban world would reach its own limits in the closing decades of the nineteenth century. The crisis of the built environment at the end of the nineteenth century curtailed the ability of British capital to continuously redevelop urban space and facilitate new rounds of capital expansion. Thus, while London and the associated urban space of British capital would continue to increase, the rate of increase would slow, allowing other emerging urban centers to catch up demographically. Further, due to the diminishing ability of British capital to achieve new rounds of self-expansion within its own built environments, more and more capital flowed away from Britain to cities outside its own urban endeavors, further undermining its long term ability to keep pace with its demographic and economic rivals in Europe and the Americas.

This picture of declining British domination in the urban world distribution is starkly revealed by the relative decline of British imperial cities at the start of the twentieth century, see Figure 7.1. Recall from Table 4.1 that of the 13 emerging cities in 1880, 7 were cities within either the British nation state or the empire and these emerging cities had the highest growth rates of any major city in the world. This was the urban space, along with London, that facilitated the expansion of British capital and its reorganization of the world economy through the built environment. However, by 1900, just 20 years later, the distribution of the largest cities in the world economy witnessed a dramatic shift away from hierarchy and begun a steady and continuous move towards heterarchy throughout the twentieth century.
For 90 years, from 1880 to 1970, the urban distribution of the largest cities would flatten under the auspices of a new world economy dominated by the United States and its associated organizational strategy; first with the rise of New York, which would overtake London as the world’s largest urban center in 1930, and then by Tokyo, which would emerge from the wreckage of World War II under the auspices of U.S. political and economic investment to overtake New York as the world’s largest city for the remainder of the century. However, no matter how fast or far the urban centers at the top of the distribution grew, new and reinvented urban spaces were moving towards demographic parity so that by 1970, the urban demographic ratio would be nearly identical to that seen in 1750 under the Dutch hegemony.\(^{40}\)

**Figure 7.1: Heterarchy in the Urban Distribution: The American City-system**

\(^{40}\)In 1970 the urban demographic ratio declined to 4.75, or that Tokyo was only 4.75 times as large as the 25th largest city in the world distribution, Jakarta. By comparison, the ratio in 1750 was 4.63, just slightly lower as London was only 4.6 times larger than Rome.
Although London would lose its dominance as the largest city by 1930, it was not the fate of London itself which fundamentally reshaped the urban distribution and marked the signal crisis of British capitalism. Instead it was the role of competing ‘city-systems’ which were now far more important to the world economy than the single, dominant, cities of historical capitalism.

Pred defines a city-system as “…a national or regional set of urban units that are interdependent, or bound together by economic interactions, in such a way that any significant change in the economic activities, occupational structure, total income, or population of one or more of the other members of the set” (Pred, 1980; pp.2). Pred was specifically discussing the rise of the U.S. national cities but here I expand the definition to include not just national and regional but territorially defined cities in a world economic system. By expanding the definition beyond the limited temporal and spatial scope of the nation state or region, we can conceptualize the non-contiguous boundaries of national and imperial designs, such as the British, as a city-system including both its national and imperial cities.

Of course the origins of city-systems predate even the British urban development distribution. The emergence of city-systems reached back to the development of Naples and Antwerp under the Genoese capital of the seventeenth century. But the British national and imperial urban distribution of the nineteenth century was the first true city-system which incorporated both national and non-contiguous urban space into a single economic organization.
If the British regime of accumulation brought a new dimension to the concept of the city-system, it was not to be the last. Well prior to the signal crisis of British accumulation and directly accelerating its onset, new city-systems were emerging which would underlie the basis of competing capital accumulation strategies of the twentieth century. To fully illustrate the role and increasing presence of city-systems in the world economy, representing different organizational forms of capital accumulation in the built environment, we can compare the rise of the British system, illustrated in Table 4.1, with the newly emerging city-systems in Table 7.2. The tables represent the demographic expansions of the world’s largest cities through two temporal periods of capital reorganization in the world economy. The rise and full expansion of the British hegemony between 1750 and 1880 in Table 4.1 and the period immediately preceding the British signal crisis of 1880 to London’s dethroning as the world’s largest city in 1930 by New York in Table 7.2. In this way I can empirically illustrate the expanded role of urbanization and the increasing importance of city-systems precipitating the crisis of British urbanization and the rise of new urban forms.

Further, we can begin to parse out why the British city-system, and its access to the seemingly limitless capital flowing through London, was incapable of re-transforming the global urban distribution as it had for over a century. Although not temporally equivalent, the two tables represent analytically distinguishable periods of reorganization in the world economy vis-à-vis Britain. In 1750 London became the largest city in the distribution and increased its position relative to other urban centers for the next 130 years until 1880. However, in the 80 years covered in Table 7.2, the positions of British cities were steadily eroded until 1930, when for the first time in 180 years, a new urban
center emerged as the largest city in the world; New York. By comparing these analytically distinct time periods we can illustrate how the urban distribution changed so dramatically, in a relatively short period of time, after the long century of British capital.

In Chapter 4 it was discussed how between 1750 and 1880, the world distribution of urban centers was transformed by the rise of cities within the British nation state and the development and incorporation of cities within the British Empire; the city-system of British capital. While London was already the largest city in the world economy, demographically, in 1750, it also had the fastest rate of expansion compared to every other eighteenth century urban rival. Only Vienna, the capital of the Austrian Empire, showed a comparable rate of demographic expansion while the growth rates of other imperial capitals, such as Moscow, Paris, and Madrid, were significantly less. Overall, while London grew to more than 6 times its size, 13 of the 32 cities in Table 4.2 expanded by a ratio of 2 or less.

More importantly for the overall distribution of urbanization during this period, it was British cities which came to directly dominate the urban distribution of the world economy. By 1880, 9 of the 25 largest cities in the world economy were directly part of the British city-system, either as centers of national organization, such as Birmingham and Manchester, or centers of imperial organization, such as Madras and Calcutta. The British had achieved a new level of urban organization by expanding the scale of national urban development to a degree far greater than that which was achieved by the ‘federation of city-states’ of the Dutch Republic and superseding it through the revival of a cosmopolitan-imperial empire. The built environment was being remade
directly by British capital to reorganize the world economy under its regime of accumulation.

Table 7.1: Comparison of Urban Expansion Between 1850 and 1930 by Population Ratio

<table>
<thead>
<tr>
<th>Largest Cities in Both Periods</th>
<th>Emerging Cities in 1930</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
<td>Chicago</td>
</tr>
<tr>
<td>Berlin</td>
<td>Ruhr</td>
</tr>
<tr>
<td>Osaka</td>
<td>Boston</td>
</tr>
<tr>
<td>Tokyo</td>
<td>Buenos Aires</td>
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<tr>
<td>Birmingham</td>
<td>Budapest</td>
</tr>
<tr>
<td>Philadelphia</td>
<td>Rio de Janeiro</td>
</tr>
<tr>
<td>Moscow</td>
<td>Hamburg</td>
</tr>
<tr>
<td>Vienna</td>
<td>Detroit\textsuperscript{a}</td>
</tr>
<tr>
<td>Manchester</td>
<td>Shanghai\textsuperscript{a}</td>
</tr>
<tr>
<td>Glasgow</td>
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<td>Paris</td>
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<td>London</td>
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<td>Liverpool</td>
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<td>Leningrad</td>
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<tr>
<td>Peking</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Former Largest Urban Centers in 1850</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Kwangchow</td>
<td>0.77\textsuperscript{a}</td>
</tr>
<tr>
<td>Suzhou\textsuperscript{a}</td>
<td>---</td>
</tr>
<tr>
<td>Kyoto\textsuperscript{a}</td>
<td>---</td>
</tr>
<tr>
<td>Hangzhou\textsuperscript{a}</td>
<td>---</td>
</tr>
<tr>
<td>Bombay</td>
<td>1.36\textsuperscript{b}</td>
</tr>
<tr>
<td>Madras</td>
<td>1.29\textsuperscript{b}</td>
</tr>
<tr>
<td>Istanbul</td>
<td>1.15\textsuperscript{b}</td>
</tr>
<tr>
<td>Naples\textsuperscript{a}</td>
<td>0\textsuperscript{a}</td>
</tr>
<tr>
<td>Lucknow\textsuperscript{a}</td>
<td>---</td>
</tr>
</tbody>
</table>

\textsuperscript{a}Population was compared to population in 1880 due to missing data.
\textsuperscript{b}Population was compared to population in 1900 due to missing data.
\textsuperscript{c}Population ratios not calculated due to missing data for other years.

However, even in Table 4.2 there were obvious signs of nascent urban formations emerging to compete with the dominance of the British urban form; the rise of competing nation states. This was most evident by the rise of the U.S. which accounted for 4 of the 13 emerging cities in 1880. If the British city-system of 1880 accounted for one-third of
all major urban centers in the world economy, the United States city-system already accounted for one-sixth of that same total.

By comparison, Table 7.1 offers a distinctly different picture of urban development in the world economy emerging during the high water mark of British capital and through its subsequent crisis and dislocation in the twentieth century. Although the American visitor to London in 1895 may ‘almost despair of ever reaching the rim’, it was not the great Metropolis which was exploding. While still increasing to over 3 times its size, only three other major cities had rates of growth slower than London over the comparable period and still remained in the dataset in 1880; Liverpool, Leningrad, and Peking\textsuperscript{41}.

Compared to other major cities of the time, London’s growth had slowed drastically and was far behind the fastest growing city, New York, which both caught up to and surpassed London as the largest city in the world economy in 1930 with nearly 8 million inhabitants. In 1880, London had been the largest city in the world with its nearest demographic rival, Paris, only half as large. By 1930 it had not only been surpassed by New York but three other cities were now more than half its size, Tokyo, Paris, and Berlin, and all three had faster growth rates. London’s position as the hierarchical linchpin of urban growth wasn’t being undermined by a single urban form, i.e. New York, but by almost every other major city in the world economy.

\textsuperscript{41}Although there are several reported growth rates for Emerging Cities which were lower than London’s in the Table, the growth rates for these cities were compared to smaller time frames than London due to missing data and their rates of demographic expansion are likely to have been drastically underestimated for the period as a whole. For example, the growth rate of Hamburg is shown as 1.52 but this represents the growth of Hamburg between 1900 and 1930. Yet in 1900 the city already had an estimated population of almost 900k inhabitants, or more than double the size of the 25\textsuperscript{th} largest city, just 20 years prior, in 1880. de Vries (1984) estimated the population of Hamburg in 1800 to be 100k inhabitants, which provides some level of comprehension to the exponential growth Hamburg must have witnessed in the closing decades of the nineteenth century, to go from a population of less than 355k inhabitants in 1880 to 900k inhabitants in 1900.
Beyond London, other British cities had seen their fortunes begin to drastically slow. Liverpool, which had the highest growth rate in Table 4.2, is now one of the slowest growing major cities just behind London; most likely a direct reflection on Britain’s declining position as world entrepôt. Calcutta, although growing slightly faster than London is still in the bottom half of urban growth rates but three further cities, Bombay, Madras, and Lucknow have slowed to such an extent that they are no longer part of the distribution. The relative decline of these British imperial cities means that Calcutta stands as the sole remaining urban representative of the imperial cities of British cosmopolitan wealth.

Indeed, well before the deconstruction of the Empire after WWII, and even at the spatial and demographic heights of the Empire after WWI (Maddison, 2001), the dynamic built environment of British imperial cities, the crux of economic reorganization that had endowed Britain with the capability to supersede the Dutch regime of accumulation in the eighteenth century, had nearly vanished from the ranks of the world’s largest cities. Lucknow had ceased to remain part of the urban distribution after 1850 while Madras was no longer part of the distribution after 1880 and Bombay after 1900. As the imperial-cosmopolitan city of Naples had been two centuries prior, each of the great cities was bled dry and ultimately burned in the ‘high-tension’ system of British capital.

The only major British cities to achieve growth rates comparable to the other urban centers in the distribution were Birmingham, Manchester, and Glasgow. Centers of the

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42 It is interesting to note the conceptual symmetry between economic growth and urban growth. That the relative decline of cities is in many cases not due to actual, absolute, decline but of only slight growth or no growth compared to other cities which catch up to, or surpass, the ‘declining’ city. Bombay increased its population to over 1 million inhabitants by 1910 but even this absolute value was far surpassed by the rapidly emerging cities in Table 6.2. Therefore in absolute terms it could still be considered a successful urban center but in relative terms it had ‘declined’ to a second tier city.
British Industrial Revolution, these built environments were the central expression of the British regime of accumulation’s internalization of production, the final, cutting-edge, reorganization of land and labor to facilitate the expansion of capital. The final conversion of the built environment of the United Kingdom into ‘one big factory’.

Ironically, the triumph of British capital to create a new, modern, urban order was also the true crisis of the built environment and British hegemony at the end of the nineteenth century; the very success of creation engendered the seeds of destruction. Although at the forefront of developing a new urban organizational model, it had superseded the previous regime of accumulation by becoming both the new mercantilist center of the world economy and by internalizing the costs of production, i.e. industrialization.

However, the British cities, especially London, were not new spaces for the accumulation of capital themselves. The new urban model could not be achieved without a complete reordering of the older urban space in Britain, a condition which required the expenditure of capital far beyond even the limits of the British state and in financiers. It was this contradiction which Harvey (1985) makes much of to explain the incongruity between the industrial capitalism of Manchester and Birmingham with the mercantilist nature of London and the British state.

“[T]he whole basis of urbanization had to change. The preindustrial city had to be disciplined, weaned away as it were from it mercantilist practices, and its assertion of the primacy of place over a capitalist organization of space in which relative rather than absolute locations had to
...Industrial capitalists, seeking out new resource bases and new sociotechnical conditions of production within entirely new urban areas outside the monopoly controls so prevalent in preexisting urban centers, could do so only in a context where a relatively strong nation state had secured the political and institutional basis for private property and that sort of control over the means of production which allowed the exploitation of labor power. Where industrial capitalism was grafted on to older structures (as in Paris and London), it assumed qualities quite different from those of the burgeoning capitalist industrialism of a Manchester or Birmingham. There are, indeed, those who attribute the relative stagnation of capitalism in France to the inability to break with preexisting patterns of urbanization and the political power of prevailing urban-based class alliances (St. Etienne was the only new major city opened in the nineteenth century). The story of Britain, Germany, and the United States was very different – new industrial centers opened up all over the place under the watchful institutional and legal eye of strong state power” (Harvey, 1985; pp. 196-197, emphasis added).
If Table 7.1 offers a distinctly different picture of British urban development it further brings into relief the emergence of nascent competitors to the British regime of accumulation; the nation states of Braudel and the new built environments of Harvey. While Table 4.2 had clearly shown the rise of a single burgeoning national city-system in the U.S., Table 7.1 shows numerous competing national city-systems with nearly every city linked to at least one other major urban center under the expanded scalar dimensions of the containers of power; the nation states. To further clarify this underlying political structure to the world distribution of cities, Table 7.2 has reorganized the distribution of the world’s largest cities in 1930 by the associated state political authority which governed them.

The twenty cities listed in Table 7.2, eighty percent of the world’s largest cities in 1930, are embedded within six city-systems all of which represent the reorganization of the containers of power under conditions of historical capital; first under the British, cosmopolitan-imperial, regime of accumulation and then under the U.S., corporate-national, regime of accumulation. It is these two city-systems, the U.S. and British, which alone account for more than half, 11 of 20, of the cities in the table and the two largest cities in 1930; New York and London. In this way we can visualize the city-systems of the central competing nation states for control and dominance in the world economy from the latter half of the nineteenth and beginning of the twentieth century. Further, we can

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43 Although several of these states were politically and spatially reorganized following the outcome of the WWI in 1918, the overall identification of state power and associated urban center remained unchanged through 1930.

44 Paris and the Latin American cities of Buenos Aires and Rio de Janeiro have been removed as they represented only single instances of their respective nation states. The Chinese cities of Peking and Shanghai have also been removed due to the continuous political instability of the Chinese state throughout the period.
begin to distinguish the type of cities which characterized their emergence and the role of
capital in the production of urban space.

Table 7.2: Comparison of Largest Cities by State Authority (1850-1930)

<table>
<thead>
<tr>
<th>Burgeoning City-Systems: 1850-1930</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>British Empire</strong></td>
</tr>
<tr>
<td>London</td>
</tr>
<tr>
<td>Birmingham</td>
</tr>
<tr>
<td>Manchester</td>
</tr>
<tr>
<td>Glasgow</td>
</tr>
<tr>
<td>Calcutta</td>
</tr>
<tr>
<td>Liverpool</td>
</tr>
<tr>
<td><strong>Russia</strong></td>
</tr>
<tr>
<td>Moscow</td>
</tr>
<tr>
<td>Leningrad</td>
</tr>
</tbody>
</table>

The Russian and Austro-Hungarian Empires were each rivals to the British and short-
lived French imperiums of the eighteenth century and early nineteenth centuries. Formed
around key imperial cities, both the empires and their associated urban spaces would be
unable to compete against the increasing reorganization of capital at the turn of the
twentieth century and ultimately cease to exist as political organizations after WWI.

Germany and Japan were also rivals to British hegemony in the nineteenth century but
each was an explicit nation building project following the blueprint of the British nation
state itself. In the creation and development of a German state, Berlin became the largest
city, economic, and political capital; a new built environment for centralization and
control in the state. Japan, with the Meiji Restoration, also represents the development of a Japanese state through which Tokyo, already a central economic center as Edo, became the political center and largest city as well.

Thus, Germany and Japan represent the reorganization of ‘nations’ along the explicit lines of the British state and British urban development with a large, centralized urban center as the economic, political, and social lynchpin while other urban spaces were industrialized and modernized as important economic centers for capital accumulation but still politically subservient built environments. Arrighi (1994) characterized Germany as “one big factory”, a statement probably no less true of Japan and the rise of Osaka; urban spaces built in response to the increasing competition between capitalists over production and ultimately facilitating the signal crisis of British accumulation.

This reversal of global urban demographics by the twentieth century was contingent upon the reorganized and expanded formation of the world economy and the non-linear nature of historical capital. To fully comprehend the differences between German and U.S. capital and its associated urbanization we must reorient our perspective back to the dynamics of historical capitalism itself.
Section 7.2:

Beyond the Nation State: Reorienting Scale

The role of urbanization in the development of national economies by the successive hegemonies in the world economy was actually more important in the rise of the U.S. system than it had been under the British or even Dutch powers. Ball and Sunderland (2001) have shown how the development of the London metropolis, an urban form of unparalleled urban concentration, created a national mass market that focused on furnishing the increasing domestic demand of the great city.

However, if London was the driving force of the national mass market of the Kingdom of Great Britain, there was no single comparable urban form driving the development of the U.S. national market. Rather, no single city in U.S. history has achieved the dimensions of scale and complexity which far outstripped any comparable entity, as London had prior. In fact, quite the opposite was true as even by 1900, New York was only about twice as large as the next major U.S. city, Chicago. While London had represented one out of every 9 people in England and Wales in 1700 (Rude, 1971), New York only represented one out of every 40 people in the U.S. in 1870, or less than 2.5% of the total U.S. population. Thus, New York accounted for an even smaller fraction of its ‘national’ population than Amsterdam had in the Dutch Republic some 300 years prior.\(^{45}\)

Instead the U.S. urban population, in the middle of the nineteenth century, was highly concentrated but heterarchically organized, primarily between New York, Philadelphia,

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\(^{45}\) The percentage of US population accounted for by New York was calculated using the 1870 US census figures for both New York and the US nation as a whole. The figures for Amsterdam and the Dutch Republic are taken from Table X in Chapter 4, from Ormrod (2003).
Boston, Baltimore, and New Orleans. These five urban centers accounted for nearly half, 49 percent, of the total U.S. urban population. The Northeast, the belt north of the Potomac but excluding western Pennsylvania, accounted for 72.6 percent of the urban population and the four cities of Baltimore, Boston, Philadelphia, and New York accounted for nearly 60 (59.8) percent of that (Pred, 1980). Even more striking is the relative positions these four urban centers would retain over the next century. “By 1840 these centers had acquired size rankings within their regional city-system that were either identical to or little different from the regional rankings held by their 1970 metropolitan-area descendents.” (Pred, 1980; pp. 19)

Notwithstanding the dominance of these urban centers in absolute terms, the continuing expansion of the U.S. westward, meant that in relative terms the percentage gains of the largest urban centers in the Northeast were actually substantially less than the relative increases for all urban populations in the country. This diversified ‘national’ structure resembles the ‘decentralized’ urban form of the Dutch Republic of the seventeenth century but expanded to a continental scale, in comparison to Braudel’s ‘fortified island’. Further, both the ‘city-system’, to use Pred’s (1980) term, of U.S. urbanization and the relentless expansion of the ‘national’ boundaries to wrest away the continent from the Native American population that existed long before the rise of U.S. industrial and economic power in the world economy.

“Despite the tangled web of economic relationships currently existing among American small towns, cities, and metropolitan complexes, despite the supposed increase in the intricacies of those relationships over the long historical
run, despite clear shifts of regional economic fortune that have occurred along with changing national and international demands for natural resources, goods, and services, and despite many recent cases of metropolitan stagnation and decline, particularly in the “Snow Belt”, the rank-size relations of major metropolitan centers within the U.S. system of cities as a whole has been characterized in some important, though limited, respects by regularity and stability since 1790…In fact, if the United States is broken up into broadly defined economic-geographic regions, it is generally found that the metropolitan units presently occupying the very highest regional city-system ranks were identified as regional leaders long before their present populations reached as much as 1 or 2 percent of their present totals” (Pred, 1980; pp. 2-3).

Like the Dutch and Venetian historical forms of urban organization that had once dominated, the structural organization of American cities, their decentralized nature, and interrelated economic formation stood in sharp contrast to the hierarchically organized form of British urbanism centered on London or the centralized structure of imperial urban cities such Bombay, Madras or Naples previously.

This dispersed form of urban development did not occur in the U.S. alone. German capital also sought to reorganize the world economy in competition with the British and in doing so was developing a new urban structure throughout the German Empire. Recall
that Berlin was one of only two cities outside the U.S. and British Empire to emerge into
the dataset of largest cities in 1880 (Table 4.2); the other being St Petersburg in Russia.
Further, Germany was the only national city-system, again other than the U.S. or Britain,
(Table 7.3) to have more than two urban centers among the largest cities in the world
economy in 1930.

In 1800, the Ruhr region had only a few small towns, the largest, Soest, had only 5,000
inhabitants. But by the end of the nineteenth century, the Ruhr would have almost 3.5
million people with nearly half living in the five largest towns (Chandler, 1987;
Hohenberg and Lees, 1985) and was possibly the first urban agglomeration of the
twentieth century. Overall, Germany would see the explosion of cities with populations
of more than 10,000 inhabitants. Initially Germany had just 34 cities with populations
over 10,000 in 1700, by 1800 it had 64 but in the next 80 years that number would
increase more than 3 times to 222 cities; or 1.5 times the number of cities than England
and Wales would have by 1880 and the largest number of urban centers in Europe46.

German industrialization and urbanization became an important challenger to the British
within Europe. With its own form of horizontally integrated business strategy and its
ability to protect itself from the British centered world economy by “suspending” the
market through negotiated contracts and government intervention, Germany was able to
make itself into “one big factory” (Arrighi, 1994; pp289-291). Yet, despite this integrated
and organized form of capital and its associated built environment, Germany was never
able to overcome the control of the world economy by the British precisely because of

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46 These figures are taken from Malanima (2010), Appendix 3.
the extensive, imperial, economy which the British Empire enjoyed. The German nation state could never overcome both the Kingdom of Great Britain and the British Empire no matter how well integrated the urbanization and business organizational forms became.

The U.S., in contrast, was also developing a national urban organizational form but one which sat upon a much larger spatial dimension than that which Germany occupied within Europe. For the U.S. was both a nation state and a continental sized economy as it added to itself through constant westward expansion. It was this continental scale of national incorporation which Arrighi (1994) argues was the one of the pivotal differences between the emerging American and German organizational forms of the world economy.

“This was indeed the single most important reason why British market capitalism was eventually superseded not by the German but by the U.S. variant of corporate capitalism. No matter how centralized and “organized” German capital became, it could not compensate for the much greater external economies that British capital enjoyed by virtue of the extent and variety of the territorial domains encompassed by Britain’s formal and informal empire.

US capital, in contrast, did not need such an empire to emerge victorious from the escalating competitive struggle.

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47 Although Germany may have had more cities that England and Wales by 1880, the overall number of British cities and their associated external economies within the Empire was still vastly greater than Germany could ever hope to match. According to the Census of the British Empire in 1901, there were 9 cities within India alone with populations in excess of 150,000 inhabitants.
Between 1803 and 1853 purchases and conquests had more than doubled the territory of the United States, which became continental in scope. The main military objective of the government became the wresting of the continent from the native Indian population. While legislation passed during or immediately after the civil war promoted the centralization of banking, the protection of domestic industries through a sharp increase in tariffs, the settlement and exploitation of land, the formation of transcontinental railway and telegraph systems, and the inflow of immigrants from Europe” (Arrighi, 1994; pp.291).

Thus, throughout the nineteenth century, U.S. urbanization operated under the combined spatial conditions of continuous geographic and demographic expansion; especially in the decades leading up to the civil war. According to the US census, between 1840 and 1860, the total urban population, for places with populations in excess of 2,500 residents, increased 3.4 times from 1.8 million to 6.2 million; or from 10.8 percent of the population to almost 20 percent of the population. This pace was “never matched during any other period of U.S. history” (Pred, 1980; pp. 11). Like its British urban counterpart a century earlier, which had laid the foundations for its nineteenth century expansion in the eighteenth (see Barnett, 1998; Chapter 5; pp. 119); the foundations of U.S. expansion in the twentieth century were being laid in the nineteenth.

“In some sense it may be true that is was not until ‘between 1880 and 1910 that the American urban network, as an
integrated system, came of age’. Nevertheless, the fragmentary but presumably representative evidence...indicates that the total pattern of interurban economic relationships continuing or emerging between 1840 and 1860 included numerous elements suggestive of a more than primitive integration among the expanding membership of the nation’s city-system” (Pred, 1980; 117-118).

However, the structure of foundations laid by British and U.S. regimes of accumulation for the later manifestation and full expansion of capital were not uniform. Rather, the differentiation between the foundation and role of British urbanism and that of its U.S. counterpart lay in the organizational strategy for capital accumulation itself; the increasing size and complexity of the ‘containers of power’ and the dialectic of urbanization bound in capitalist organization.

As discussed earlier with the rise of the British urban hierarchy; the British regime of accumulation had superseded the Dutch regime by internalizing the costs of production, just as the Dutch had superseded the Genoese by internalizing the costs of protection. To achieve this internalization of production, the British regime of accumulation had reorganized the land and labor of its national and imperial urban systems and redirected interstate competition to its own ends.

First in the historical development of a ‘national’ city system completely centered upon and dominated by London, the British regime had overcome the Dutch limitations of
agro-industrial dependency on foreign territories. Then, when this urban method was enlarged through the expansion of the British Empire, the British regime created an imperial city system which redirected the flow of an unprecedented level of the world’s material to its very doorstep and superseded the Dutch regime of accumulation through the revival of the cosmopolitan-imperial strategy of the Genoese-Iberian regime of accumulation. By redeveloping the built environment of British cities, both domestic and imperial, British capital recreated the conditions of development for hierarchical urbanization as those seen in Naples three centuries prior but on a much larger and more complex scale.

“In each city, a commercial class dominated affairs. This class defined itself in relationship to the metropolis of London and to a larger world of commercial centers…Truly the products of a time of major historical transition, colonial cities were the far-flung outposts of an empire…-London-and which exercised primate dominance, though it no longer resembled a city-state, but rather a nation-state” (Monkkonen, 1988; pp.50-51).

Just as the British had superseded the Dutch by the internalization of production, so too in turn would the U.S. regime of accumulation supersede the British by internalizing transaction costs; “…associated with the transfer of intermediate inputs through a long chain of separate organizational domains connecting primary production to final consumption”. In this way a new form of capitalist organization emerged which “…internalized a whole sequence of sub processes of production and exchange from the
procurement of primary inputs to the disposal of final outputs” (Arrighi, 1994; pp. 239-240).

If Britain had reorganized its urban system to centralize the functions of the world economy at all levels of production and consumption towards one space whose nexus was London, the U.S. regime of accumulation would reorganize the land and labor of its urban system to spatially distribute the functions of the economy throughout space but subjected to the economizing logic of the corporate enterprise.

Arrighi’s “…highly extroverted, decentralized, and differentiated structure…” (Arrighi, 1994; pp.283) and the tendency towards *lassiez faire, lasissez aller* of both British business and governance, led to a process of world market formation “…in which the most important branches of British economic activity developed stronger links of complimentarity with the economies of colonial and foreign countries than they did with one another” (Arrighi, 1994; pp.281).

From the structural standpoint of urban development, this meant that key cities were needed to ensure this organization with the far flung components of British world market; the primate cities of the British Empire. Integrated urban formation, like the ‘decentralized metropolis’ of the Dutch Netherlands, was far less critical to the expansion and organization of capital than the urban sentinels of British rule, both domestically in London and internationally in places like Madras and Cairo. Rather, the great British cities of the nineteenth century served as the gateways of flexible accumulation, imperial protection and oversight.
The U.S. regime of accumulation, by contrast, was ‘autocentric’ such that the basis of the process of world market formation was ‘internalization’ so that “…economic activities in the United States remained organically integrated into a single national reality to a far greater extent than they ever were in nineteenth century Britain” (Arrighi, 1994; pp.281). In this way, spatiality became irrelevant to much of the corporate planning process of U.S. capital for two reasons.

One was that unlike British capital and its relationship to London, the expansion of U.S. capital was not tied to control over the world market through a centralized urban form, a central entrepôt of capital. Rather, the expansion of U.S. capital was tied directly to its ability to create numerous urban spatial organizations from which its corporations could reduce the uncertainty and costs in acquiring inputs and outputs all the way to final consumption.

The other, was that unlike the highly specialized firms of British capital, which were relatively smaller and thus generally embedded in local political and social networks, U.S. capital was being organized into giant businesses. “Having internalized a whole sequence of sub-processes of production and exchange…this new kind of capitalist enterprise was in a position to subject the costs, risks, and uncertainties involved in moving goods through that sequence to the economizing logic of administrative action and long-term corporate planning” (Arrighi, 1994; pp.240).

These organizations, centrally planned and organized by administrators and managers, created political and social networks that were primarily embedded within the company structure and less with their specific geographic locality. Thus, corporate logic was freed
from the logic of space by both the ability of locational choice and the internalization of social networks.

Combined, these spatial differences in the organization of capital translated into very different conditions in the relationship between capital and the urban form. Locational space had been central to British capital. Either the requirement to be within the great metropolis itself, to access its national mass market, imperial or entrepôt functions, or within particular spaces which radiated out from it, the primate cities of Empire; space was always centrally important. In contrast, U.S. capital, by internalizing the transaction costs within the corporation itself, benefited from the distribution of its production and consumption functions across space and limiting the spatial power of local political and social networks.

Thus, British capital was most profitable by tying the whole world to the imperial and entrepôt functions of London and specializing in high valued-added economic activities. Whereas, U.S. capital was most profitable by decentralizing the processes of production and consumption spatially but internally centralized to long-term corporate planning through vertical integration. It is in this context that we can comprehend R.J. Morris’ (1992) outline of the differentiation between the British city system and the U.S. and European city systems of the nineteenth and twentieth century’s, in their relationship to the local state.

“British cities lacked two features which appeared elsewhere in the economic development of cities in industrial systems. There was little need for intervention to
aid reproduction of capital on a ‘booster’ basis. Instead, by the end of the century local government agencies had amassed a massive and specialized social capital. The town in Britain never became a unit of entrepreneurship as it did in other economies but it did react to the results and impact of entrepreneurship. Also missing from this history was the intense bargaining over locational decisions characteristic of nineteen-century North American and twentieth-century European cities. Locational decisions were taken in the context of the overall market and cost structures of a developed urban system. There were few financial, commercial or industrial units capable of bargaining over location with these established urban communities. The locational inertia of industrial capital was increased through its ownership by families embedded in local social and political networks. Even the railway companies were weak when bargaining with local authorities” (Morris, 1992; 195).

It is here that the dialectic of urbanization has once again come full circle. If the British regime of accumulation had created the conditions for a centralized, hierarchical, urban development through a revival and expansion of a built environment of the Genoese-Iberian world-economy, the U.S. regime of accumulation had created the conditions for a
decentralized, heterarchical, urban development through a revival and expansion of the
built environment of the Dutch Republic; a decentralized metropolis of continental scale.

Further, the extensive, hierarchical, organizational structure of the British regime,
through the development of imperial urban forms and cosmopolitan capital had achieved
a geographic expansion of the world economy far beyond the limited scale of the Dutch
commercial outposts and centered on the Kingdom of Great Britain. Under the revived,
extensive, structure of British capital, London had become the largest city in world
history, achieving a level of demographic expansion, far beyond the limited imperial
capitals of Spain and Portugal or the city-state of Genoa. Its expansion of the world
economy, by ‘conquering’ the world, further developed the national and imperial
metropolises such as Manchester and Madras to demographic limits far beyond that
witnessed in Naples three centuries prior.

In turn, the intensive, heterarchical, organizational structure of the U.S. regime, through
the development of ‘national’ urban forms and corporate capital had achieved the
consolidation of the capitalist world economy by integrating the geographically expanded
spatial dimensions into a ‘system of national markets’ centered on the United States
(Arrighi, 1994). Under the revived, intensive, structure of U.S. capital, national city-
systems would come to dominate the world economy far surpassing the historical limits
of Amsterdam. New York may have been the largest city in the world economy for part
of the twentieth century but it was always a component for national organization and
never achieved the primate status of London, domestically or internationally.
If urbanization of key cities characterized the British regime of accumulation, the urbanization of the entire world economy characterized the U.S. regime of accumulation. If British expansion found new markets by expanding the world economy, the U.S. intensified these markets by creating national city-systems with an urban labor force largely dependent upon processes of production and consumption within the built environment and subject to the whims of capital freed from its locational chains.
Section 7.3:

The Economics of Governance and Debt: Extending Capital

Arrighi argues that the fulcrum of capital reorganization under the U.S. systemic cycle of accumulation was the internalization of transaction costs by the creation of vertically integrated business organizations. In this way the U.S. corporations created ‘economies of speed’ rather than ‘economies of scale’ (Arrighi, 1994).

To this Pirenne’s (1953) alternation of phases of ‘economic freedom’ and phases of ‘economic regulation’, which Arrighi (1994) noted correlated broadly to the succession of cycles of accumulation, also plays into the process of urban development and organization. The ‘economic freedom’ of laissez faire capitalism of the Iberian-Genoese and British regimes of accumulation meant the, comparative, limitation of governmental intervention and underwriting of urban development outside of major centers for the production of protection and oversight.

Thus metropolitan dominance, the concentration of governance and governmental organization into specific spatial complexes to maximize its effectiveness and reach, was a direct consequence of the accumulation strategy of Iberian-Genoese and British capital at different intensities. The ‘economic freedom’ of the capitalist ‘nations’ of sixteenth century Europe engendered the urbanization of capital only at points where the oversight and protection of capital were most critical; i.e. the city of Naples. With the incorporation of both state functions and capital finance into a single political entity, the British regime of accumulation revived the Genoese strategy of accumulation but on a scale many times
that of the Iberian Empire. Thus, the urbanization of capital took the form of internal concentration, London, and external organization in the key fulcrums of Empire.

Periods of ‘economic regulation’ – first through the organization of capitalist city-states, i.e. Venice, where the state itself was directly involved in the promotion and organization of capitalist enterprise, to the Dutch metropolis, and finally to the U.S. continental city-system – were underwritten by the direct involvement of governments in their organization and promotion. The strategy of Dutch governance within the Low Countries ensured urbanization was distributed throughout the quasi-nation-state on a scale far greater than that we first witnessed in Venice and Terra Firma. By internalizing the protection costs of capital accumulation, the Dutch state expanded the scale of the Venetian urban organization by dispersing governmental and organizational roles within the world economy throughout its urban spatial arrangement, thus expanding its regulation of the built environment.

Finally, U.S. governance expanded this role even farther by underwriting the creation of a continental domestic market capable of achieving a new scale of organization and expansion. First by ‘emptying out’ the continent of the Native Americans and then by refilling it with seemingly limitless charter opportunities for new urban spaces which could facilitate the needed organizational hierarchy of U.S. corporate logic; the vertically integrated corporate organization.

Therefore, the urban process in the U.S. was actually the result of two related but distinct movements; one political and one demographic. The demographic movement was the
classic trend of urbanization but the political movement was the creation of numerous new urban entities; the process of city building itself.

Examining the two hundred years covered in Table 7.3 we see that even as the total U.S. population became urbanized, from around 5% of the population in 1790 to over 75% of the population in 1990, the number of cities per capita increased even faster, such that, in the two hundred years, from 1790 to 1990, the number of cities per capita continually decreased; from one city for approximately every 163k inhabitants in 1790 to one city for approximately every 29k inhabitants in 1990. Thus, the number of city governments per capita, is more than five times larger at the end of the twentieth century than it was at the end of the nineteenth century despite a more than 6000% increase in the US population as a whole.

48 These values become even more striking when considering the changing definitions of urban space by the U.S. census over the period. In the latter half of the twentieth century, the U.S. Census began redefining how it counted urban areas, identifying “urbanized areas” of 50,000 inhabitants or more and ceased differentiating the number of political entities located within these areas. In this way the Los Angeles-Long Beach-Anaheim region is considered a single urbanized area with no distinction made among the corresponding political organization. While this makes obvious sense demographically, it obscures the number of political entities which exist within this space making direct comparisons with the historical census data problematic. Thus, by the 1990 definition of urban space there were 8,510 cities in the U.S. But the 2010 census only recorded 3,601 cities. Although the Great Recession may have hit cities quite hard, it seems unlikely that nearly 5,000 cities ceased to exist or where annexed out of existence by other urban centers between 1990 and 2010.
Table 7.3: The American City-System: Cities per Capita in the U.S. for Select Years

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Population (in thousands)</th>
<th>Urban Population (in thousands)</th>
<th>Urban Percentage of Total Population</th>
<th>Number of Cities</th>
<th>Cities per Capita (in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1790</td>
<td>3,929</td>
<td>202</td>
<td>5.14%</td>
<td>24</td>
<td>163.708</td>
</tr>
<tr>
<td>1830</td>
<td>12,860</td>
<td>1,127</td>
<td>8.76%</td>
<td>90</td>
<td>142.889</td>
</tr>
<tr>
<td>1880</td>
<td>50,189</td>
<td>14,129</td>
<td>28.15%</td>
<td>940</td>
<td>53.393</td>
</tr>
<tr>
<td>1930</td>
<td>123,202</td>
<td>69,161</td>
<td>56.14%</td>
<td>3,183</td>
<td>38.706</td>
</tr>
<tr>
<td>1970</td>
<td>203,302</td>
<td>149,646</td>
<td>73.61%</td>
<td>6,433</td>
<td>31.603</td>
</tr>
<tr>
<td>1990</td>
<td>248,709</td>
<td>187,053</td>
<td>75.21%</td>
<td>8,510</td>
<td>29.225</td>
</tr>
</tbody>
</table>

* Data derived from the U.S. Census “Population and Housing Unit Counts”, Table 4. [http://www.census.gov/population/censusdata/table-4.pdf](http://www.census.gov/population/censusdata/table-4.pdf)

The U.S. urban transition was made as much by the demographic transition of rural to urban as it was by the process of creating, physically and politically, new cities.

Monkkonen cites de Vries (1984) when he compares this process in the twentieth century to Europe; “Of the 390 European cities with populations over 100,000 in 1979, 176 or 45 percent were “new” in the sense that they had fewer than 10,000 persons in 1800. In sharp contrast, out of the 153 U.S. cities greater than 100,000 in 1970, only three had had over 10,000 in 1800 and only 23 had existed at all” (Monkkonen, 1988; pp.74-75). Many nation-states of the period were experiencing a demographic movement towards cities with levels equivalent to or even surpassing the rate of urbanization in North America. However, none were building as many completely new urban centers as that which were emerging in the continental economy of the United States.
This explosion of municipal charters is central to understanding the expansion of capital, at the close of the nineteenth century, which would provide the springboard for the dynamic rise of the U.S. in the world economy of the twentieth. “By granting virtually any settlement the privileges of a corporate charter, state legislatures created a spectacular opportunity for a new form of entrepreneurship, the city (of village or town) as economic actor… Thus the carnival of land sales provided a façade for the business of capital expansion across the continent” (Monkkonen, 1988; pp.142).

The dispersal of urban governance meant the subjection of urban space to the competition of capital itself, rather than the competition of capital for locational space. The creation of so many new cities meant almost limitless opportunities for investment and reorganization of the built environment with local governments forced to compete to obtain and retain access to markets and the new, large scale, corporate enterprises which dominated the national economy. The ultimate irony, in the results of this process, was that just as the new urban order was undermining and destroying the foundations of the primate city in Europe it was also being idolized in the new manufactured spaces of decentralized urbanization in the U.S.

“If the very early decades of the nineteenth century on, a shameless hucksterism accompanied the explosion of new cities in the nineteenth century. It accelerated throughout the century, so that by the 1870s, empty stretches of land across the Midwest and West were touted as the new Rome, Athens, or Paris. In spite of uncountable false starts, heavy competition, and severe attrition, there are still eight
Romes, fifteen Athens, fourteen Parises, twenty-two Manchesters, twenty Oxfords, fourteen Cambridges, and seventeen Londons or New Londons in the United States” (Monkkonen, 1988; pp.142).

For the U.S. regime of accumulation “…came into existence as an integral and subordinate component of the structures of the accumulation of the dominant British regime, and then contributed to the destabilization and destruction of these structures…” (Arrighi, 1994; pp.281). The very nature of urban organization under the primacy of London and the British imperial system provided a consolidated international market organization which the U.S. urban centers could tap into without requiring the same level of concentration in its home, national, market.

In benefitting from the vestiges of its colonial relationship to the entrepôt of the world economy in the nineteenth century, U.S. cities also created the conditions which undermined and ultimately reversed the hierarchical organization of urban space in the twentieth century.

“What might appear from a bird’s-eye view to have been a natural expansion of cities across the North American continent was in fact a phenomenon born of timing and decline in the significance of the primate metropolis… [T]he traditional city had had a functional primacy, whether in ancient Syria, first century Rome or seventeenth-century London. But on the North American fringe, a new model of
city arrangement grew, its growth overshadowed at first by the sensational growth and urban spectacle of London” (Monkkonen, 1988; pp.78).

The problem with this argument is that it characterizes urbanization in the U.S. as unique in urban history. The ‘model of city arrangement’ that Monkkonen states as ‘new’ bears a striking resemblance to the urban patterns we saw in the Dutch metropolis of the seventeenth century. While the scale and complexity of urban growth and development in the U.S. far surpassed the historical organization of the Dutch, its organization was centered on a flexible and powerful base capable of taking advantage of the extensive world economy of the previous hegemon.

The decentralization of space and the corresponding dispersal of governance which occurred in the U.S., at the close of the nineteenth century, served the expansion of capital in another, related, aspect. The subjection of urban space to the competition of markets and business also made urban space subject to the competition for capital.

It has been argued that policies of local debt contrasted sharply between the United States and Britain primarily due to how urban entities were organized as corporate entities. Under the ‘conservative’ theory of corporate regulation in the nineteenth century, British corporations, including municipal corporations, were only allowed to engage in activities which they were specifically chartered to do. Whereas, under the ‘liberal’ theory of corporate regulation in the United States, corporations, including municipal corporations, were only restrained (regulated) by civil and criminal laws and could thus pursue any
policy or activity which was interpreted to achieve the overall success of the corporation (Sbragia, 1981; Glassberg, 1981; Monkkonen, 1988).

This had substantial implications for the role of urban development in the United States compared to other urban organizations, especially the cities of Britain, but most importantly in the role played by municipal debt and the private money market. Since U.S. municipal charters required no prior or preexisting authority to engage in social and economic activities, unlike their European counterparts, these municipal corporations had an almost unlimited capacity for borrowing and directly competing for capital with private debt instruments.

Whereas The Municipal Corporations Act of 1835 Britain set local borrowing at no more than “two year’s rateable value of the district”, not a single U.S. state constitution set a municipal debt limit until after 1870. Although some debt ceilings were initiated by states at the close of the nineteenth and beginning of the twentieth centuries, these values were often much higher than those set in Britain. For example, Chicago’s debt ceiling was set at 7 percent of real property value in the 1920’s. More importantly, all debt ceilings were based on assessed property values.

“Of the fifteen [states] that were to set state constitutional restrictions or the three states where legislatures were authorized to set limits, all were based on a proportion of assessed property value. This, of course, made the actual amount of the debt highly flexible at the will of the city assessors. This means that in two ways, nominal limits and
assessments, the U.S. debt limit was substantially more generous than Britain’s, perhaps by a factor of ten” (Monkonnen, 1988; pp.139, emphasis added).

What this meant was that U.S. local urban debt, at the close of the nineteenth century, far surpassed both the debt of the largest economy in the world, Britain, and the entire federal debt of the United States itself. Estimates of local debts of cities and towns anywhere are highly problematic both because of the historical nature of economic measures but also because the inherent question of what is considered part of a local city or town. However, we can use those estimates which do exist to develop a crude picture of the scalar difference between the U.S. and Britain at the close of the nineteenth century.

Local debt within Britain had been accelerating, especially after 1870, so that by the middle of the decade, 1874/5, the total local debt for England and Wales was estimated to be £93 million. By 1880 this had grown dramatically to around £137 million and by 1890 the total may have exceeded £200 million (Kyd, 1903-1905). Thus, over the last 80 years of the nineteenth century, Kyd can claim that while the National Debt of Britain declined by 28 percent, the local debt grew by more than 100 percent (Kyd, 1903-1905; pp.389)\(^{49}\).

However, even as the local debt of Britain was growing, the local debt of the United States was exploding. Although there are competing claims as to the level of local borrowing in the US in the latter half of the nineteenth century, these figures provide a

\(^{49}\) There remains the question of what exactly ‘local debt’ means in this context as it is likely that this figure includes both urban and rural municipalities. Kyd states that so many municipal and other corporate organizations had created forms of marketable security that more than 40 pages of the *Stock Exchange Official Intelligence* were filled with brief descriptions of Corporation and County Stocks of the United Kingdom (Kyd, 1903-1905; 388).
distinct guideline as to the relative level of spending which was occurring. Monkkonen estimates the combined local debt of cities and towns in the U.S. totaled $328.2 million in 1870, rising to $701.9 million by 1880, and rising to $761.2 million by 1890, despite the massive depression of the 1880s (Monkkonen, 1988; Scobey, 2002). Sbragia sets this value even higher at $821 million in total municipal indebtedness by 1880 (Sbragia, 1996) 50.

Accounting for population differences, it is estimated that local, per capita, U.S. debt was between $13 and $14 higher than in Britain by the close of the nineteenth century (Monkkonen, 1988; pp.141). Thus, while per capita state debt in the U.S. fell by nearly half, local per capita municipal debt may have increased by as much as 176 percent between 1866 and 1876 alone (Sbragia, 1996; pp.56).

The economic conditions underlying this massive debt can be seen clearly in the city of New York which had led an impressive real estate explosion throughout the U.S. So that between the 1850s and 1870s, property values in the city increased more than four-fold and the construction of new buildings reached more than two thousand per year between the 1860s and 1870s (Scobey, 2002). Real estate transactions in New York alone averaged $20,000 by the 1870s, higher than transactions in London and possibly the highest of anywhere in the nineteenth century. It has been suggested that “…a ‘speculation ratio’ two-thirds higher than that of the Gilded Age as a whole” may have

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50 The problems inherent in this comparison are, of course, endemic to the comparison of both historical economies and urban space in general. Therefore, there is no attempt here to claim the rate of capital expansion in the U.S. was five to six times greater than that which was occurring in Britain. However, the relative differences in scale serve as a strong guide to the overall intersection of urban development and capital expansion occurring at the close of the twentieth century. Even if we were to further compare these numbers using an exchange rate of approximately $4.50 to the pound, the level of local debt held in the U.S. and Britain is nearly identical, despite the higher level of per capita wealth in Britain.
been in effect in New York with six dollars spent on property conveyances for every one dollar spent on new construction, (Scobey, 2002; pp. 82).

“Given the unevenness of nineteenth-century financial data, it is difficult to calculate precisely how much capital these institutions [Savings Banks and Life Insurance Companies] channeled from their depositors and policyholders into the New York built environment. It is certain, however, that the institutional credit market provided the majority of resources for the reconstruction of Victorian New York. In 1873, for instance, when approximately $170 million was spent on real estate and new construction in Manhattan - $85 million to $100 million of it borrowed – the money lent on mortgages by city savings banks alone totaled $50 million…Such data vividly illustrate how much New York had become a unified field of commodity exchange by the 1870s – and how much that unity depended on a risky system of speculative growth” (Scobey, 2002; pp.113-114).

It was precisely this urban reorganization that came to play a massive role in the underwriting of capital expansion and directly compete with private capital investments at almost precisely the same historical point as the signal crisis of the British systemic cycle of accumulation. It was local urban governments, as well as private organizations, which were capable of absorbing the massive amounts of British capital that was searching for returns which it was no longer able to procure within the material expansion
of the British Empire. The explosion of local debt in the US, in the latter half of the nineteenth century, was not about nation-building, like federal investment in railroads and infrastructure was; it was about city-building (Sbragia, 1996).

“With their powerful borrowing potential, these new cities burst upon the economic and demographic scene of the Western world, competing with other capital enterprises for loans and providing relatively secure investment opportunities. Even when the capital did not go directly into build streets and schools in brand new towns and cities, it often went into the businesses that the new towns in turn aided and supported with large local subsidies, from manufacturing firms to the burgeoning railroads” (Monkkonen, 1988; pp.143).

Only by creating a continental city-system of unprecedented scale and organization could the U.S. have achieved both the necessary expansion of capital itself and the urban organization capable of being utilized to achieve the internalization of transaction costs within the organization of U.S. business. Through the new regulation of urban governance, the issuance of carte blanche charters by state legislatures, the opportunity for urban growth was unleashed into the market, freed from the limited government intervention of the British regime of accumulation.

“This bubbly spirit of urban boosterism fronted a very serious enterprise. It also masked a unique moment in
urban history, a moment when thousands of entrepreneurs seized the opportunities to build a whole new system of cities on a basis never before tried. The new basis included unprecedented demographic growth and an expansion of a capitalist economic system underwritten and boosted rather than restricted by government” (Monkkonen, 1988; pp.142).

While Monkkonen argues this is ‘unique’, I would argue that was only a unique moment in U.S. history and not to historical urban development. However, in this way, a new round of capital expansion with the built environment was achieved and capital itself was freed to exploit the new, unlimited, locational opportunities for investment and organization anywhere within the American city-system.

The loss of flexibility incurred by the internalization of transaction costs by corporate logic was more than offset by gaining the flexibility of space itself, within the large-scale capitalist enterprise. However, this gain in flexibility and its corresponding reduction in costs, could only have been achieved by the expansion of state regulation, through unlimited city charters, and thus the subjugation of the city to the logic of market competition. In this way, the U.S. regime of accumulation was capable of subsidizing the capitalist enterprise through the built environment of the continental city-system of American urbanism.
Section 7.4

A View from Druid Hill: A Nineteenth Century World City?

Although Baltimore was not among the cities listed in Table 4.2, it had only just missed joining the ranks of the 25 largest cities in the world economy at the close of the nineteenth century. Recall, that under the auspices of British imperialism at the close of the nineteenth century, the city of Cairo had been remade to facilitate the new accumulation of capital and, as such, had seen its population grow rapidly so that is just made our list as the 25th largest city in 1880.

However, the urban forms of the U.S. regime of accumulation were rapidly beginning to emerge to rival the British cities of cosmopolitan-imperial capital and if we had extended our analysis of largest cities to 30, Baltimore would have been included in our list of emerging cities in 1880. From a population of only some 170,000 inhabitants in 1850 the city population had nearly doubled in 30 years to a population of approximately 332,000 inhabitants, just ahead of Brussels and roughly equivalent to Dublin51; making Baltimore an interesting case of a city that had the size, wealth, and therefore relative power, in the world economy to compete with both its domestic and international rivals but is rarely recognized or remembered for this fact.

Thus, when in 1991 David Harvey wrote his seminal essay, “A View from Federal Hill”, he set out to focus on the precarious condition of the city in relation to the financial expansion of the world economy at the close of the twentieth century only. In this work he argued that looking at the Inner Harbor of Baltimore, the city center, gave an

51 Comparison of populations and rankings of largest cities based on the 1880 U.S. Census, Chandler (1987), and de Vries (1984).
impressive introduction to what a city is about; the “financial aristocracy” of the Baltimore economy that was remaking the built environment of a dilapidated old urban core (Harvey, 1991; pp.227). In it, he describes the reorganization of Baltimore’s downtown space to subsidize and facilitate the expansion of capital investment and organization under the aegis of rehabilitating the city for all. This new urban form is created as both a symbol of rebirth for Baltimore but also as a model for the reorganization of the built environment to suit the needs of capital accumulation, ultimately seeking to profit off the backs of an already impoverished city and people.

Although this does not set out to contradict his argument, I will state that when trying to place Baltimore into a comparative historical perspective, the better view is not from the South across the harbor but from the north, across the Jones Falls River from the green tract that, today, sits obscured from and largely ignored by, much of the city population; Druid Hill Park. From here, one can still see Harvey’s ‘financial aristocracy’ of the late twentieth century but, just as importantly, can also see the material aristocracy of one of the original world cities of American capitalism.

If one stands at the base of the Moorish Tower in Druid Hill Park, also known as the White Tower, looking southeast, they are witness to an astounding contemporary and historical view of the city of Baltimore. From its origins in the British systemic cycle of accumulation through the current, ongoing, crisis of American capital, the historical landmarks of Baltimore stand as signposts to the relationship of the built environment to the dynamics of capital.
Druid Hill Park itself is first among the sentinels to the historical conditions of urbanization and competition for global capital. Bounded by Interstate 83 and State Routes 129 and 140, this former symbol of power and wealth in the world economy is lost amongst the thousands of cars and their associated passengers who race by, going to and from the spires of Harvey’s ‘financial aristocracy’ without ever looking up at the forlorn white marble tower which sits above the concrete freeway; a remnant of the grand designs towards global relevance in the world economy of the previous century that remains standing, simply because its sheer weight and size have prevented its destruction.\footnote{Between 1930, when the tower was closed to the public, and 1990 when it was partially restored by the Department of Public Works, the Moorish Tower faced several attempts at demolition, most notably during the 1960s and 1970s with the construction of I-83. However, partly by acts of residents who sought to preserve the tower, but mostly by the sheer thickness and weight of its walls, eighteenth inch thick solid marble blocks which reach more than 30 feet in the air, the costs of demolition were too high and always abandoned (Bowditch and Draddy, 2008).}

Conceived of in the mid nineteenth century, Druid Hill Park has been heralded as one of the great achievements of American urbanism; like its brethren in New York and Philadelphia.\footnote{I am referring to Central Park of New York and Fairmount Park in Philadelphia.} Built from the American Parks Movement, Druid Hill was part of a process of redefining the urban form and culture following the example of the Parks Movement in Europe (Schulyer, 1986). Ostensibly the reconciliation of city and country, within the built environment for the public good, the American Parks Movement was also an attempt to prove the status and power of U.S. cities in comparison to its European rivals; primarily the primate city of London.

The model of place in the world economy of the nineteenth century was not in great buildings but in parks, specifically the great parks of London. Begun in the heyday of the...
British material expansion of capital, the first significant push occurred in 1833 as a recommendation to the British Parliament\textsuperscript{54}, the ability to create great swaths of space within the built environment of the city was the ultimate expression of the economic success of British capital to set aside, potentially, profitable space and forego opportunities to pursue even greater returns on investment through its conversion to conditions for production. Further, the creation of public space required the logic of capital to not only forego potential profit but risk increased claims on already existing capital accumulation to build and support such an endeavor.

However, this did not simply represent an altruism of capital for the public good, for by its very act it also set an indelible flag into the built environment of the capitalist city of the cosmopolitan-imperial regime of accumulation, proclaiming an urban space so profitable and powerful that only the great cities of the nineteenth century world economy could claim such a mantel. London, already the most populous city in the world economy, could now prove its unparalleled prosperity and power by symbolically wasting space, a very dear resource within the hierarchical city, by forever preventing its conversion to a form from which the expansion of capital could be achieved\textsuperscript{55}.

While all cities had, and have had for many centuries, open and public space within their political boundaries, these were always relatively small, primarily small gardens for vegetables or open squares at the junction of roads, and not formalized as public spaces

\textsuperscript{54} This refers to the 1833 Select Committee on Public Walks but as early as 1803 there had been growing calls for new public space in London (Schulyer, 1986; pp.60).

\textsuperscript{55} It has been suggested that the evolution of the Victorian suburbs of London, which facilitated a final round of capital expansion at the close of the nineteenth century, may have had its origins in the development of Regent’s Park where John Nash established the tradition of the small suburban villa. “...the application of the village idea to the suburb was new and had a universal future. The villas are too closely set, therein also anticipating Victorian suburbs” (Cherry and Pevsner, 1998; pp. 382).
or recreational areas (Benton-Short and Short, 2013). However, beginning in eighteenth century, London had slowly begun converting a former royal hunting enclosure, Hyde Park, into formal public space. First in the 1730s, soon after London overtook Paris as the largest city in Europe, Hyde Park underwent extensive renovations and was turned into a landscaped garden for public display with the creation of The Serpentine and other landscaping at a cost of some £20,000 in public funds. This was followed by Regents Park, converted from leased land for small holdings to a landscaped garden under John Nash, beginning in 1809, and formally opened to the public in 1835, by which time it was also the home of the Zoological Society and and the Royal Botanical Society, creating the first public zoo in 1847 (The Royal Parks, 2012).

By the middle of the nineteenth century and the unquestioned assent of London as the most powerful city in the world economy, these parks, along with several others, had become both a national and international venue for the display of British power and wealth in London (Walford, 1878; The Royal Parks, 2012)\(^56\). In this way, the power and status of London became intimately associated with the architectural feature of great open spaces, carefully crafted and controlled to present a specific country image within the urban landscape.

Thus Schuyler (1986) can provide pages of quotes by prominent Americans of the deficiency of U.S. cities in comparison to their European, especially British, rivals. This included A.J. Downing, the architect who designed the Washington Mall, who wrote in

\(^{56}\) In 1814 Regent’s Park was the venue in which the successful conclusion of the Napoleonic Wars was celebrated by the Prince Regent, George IV and in 1851 Regent’s Park was again used as the venue for the Great Exhibition of the Works of Industry of All Nations, the first World’s Fair of its time. (The Royal Parks, 2012; “History and Architecture” http://www.royalparks.org.uk/parks/hyde-park/about-hyde-park/history-and-architecture).
1851, “Deluded New-York has, until lately contented itself with the little door-yards of space… in the mistaken idea that they are parks…What have been called parks in New-York are not even apologies for the things: they are only squares, or paddocks”. While Olmsted, Max Weber’s “geotech”\textsuperscript{57}, had written only a year prior, in 1850, “Probably there is no object of art that Americans of cultivated taste more generally long to see in Europe, than an English Park” and Caroline Kirkland noted, “Nothing we saw in London made our own dear city of New York seem so poor in comparison as these parks” (quoted in Schuyler, 1986; pp. 62-63).

“Visits to European parks touched a sensitive nerve among American travelers. Although most of these parks were originally restricted for use by royalty, by the 1840s and 1850s they were open for the enjoyment of all classes of people. Those who trumpeted the advantages of republican government over Old World aristocracy had to admit that European provisions for public recreation were more successful than anything undertaken in America…The challenge to national self-esteem was explicit: if monarchial Europe could provide parks for the people, so too must the United States. Could not ‘our sovereign people’, Downing inquired, also ‘make and support these great and healthy sources of pleasure and refinement for themselves in America?’…

\textsuperscript{57} Weber described Olmsted as a “geotech” because he felt there was no word to properly describe what Olmsted accomplished.
Acknowledgement of worsening urban conditions and of the importance of open spaces in fostering public health and recreation, as well as a concern for the nation’s self-esteem as a republic and its intellectual and moral improvement, led Americans of various regions and occupations to advocate the establishment of public parks in their cities. Underlying and uniting these diverse concerns was the continuing redefinition of urban form and culture in what nineteenth-century Americans considered ‘Nature’s Nation’” (Schuyler, 1986; pp. 64-66).

Thus, the explosion of great parks in U.S. cities can be seen as both a national and international competition in urban symbolism to attempt to claim equal status with the preeminent power in the world economy, London. Within 10 years of the Great Exhibition in Regent’s Park, the cities of New York, Philadelphia, and Baltimore had all begun the complicated and expensive undertaking of creating their own vast expanses of landscaped, public gardens within their borders; Central Park was begun in 1858, Fairmount Park dedicated in 1855, and Druid Hill Park was purchased in 1860. Each of these parks sought to replicate the grandeur of the parks in London in size, design, and attractions and each of these parks would eventually include their own zoological and botanical gardens with animals and plants imported from around the world to proudly be put on display. “Giant glass conservatories… became quite the fad after Queen Victoria opened the Crystal Palace for the Great Exhibition in 1851. Soon after, cities across the
United States were building ornate conservatories and filling them with exotic plants from around the world” (Lee, 2013).

Returning to our view from the Moorish Tower, if the park in which we stand is the sentinel and symbol of urban status under the auspices of British hegemony, we need only look down the Jones Falls River Valley to see the future symbol of U.S. dominion in the world economy; towering structures erected vertically in space, as opposed to the horizontal orientation of the park. And as one looks southeast they will clearly see the great spires of Harvey’s ‘financial aristocracy’, but if they look hard enough at the edge of these monoliths, they may see a small, red brick, tower. Usually lost in the shadows of the glass, steel and concrete behemoths of Downtown Baltimore, at its eastern edge, stands another historical remnant of Baltimore’s status in the world economy. This largely lost and forgotten landmark, nearly torn down to make way for a gas station in 1921, is the Phoenix Shot Tower, also known as the Old Baltimore Shot Tower.

Its specific economic and architectural history is irrelevant for our purposes here, save for its central historical claim to fame; it was the tallest building in the United States from 1828 to 1846. Even this specific fact is mostly a side note since we have just established that Druid Hill Park was much more important to the status of mid-nineteenth century Baltimore than having the tallest building. However, this minor detail foreshadows an alternative symbol of status and power in the world economy of the twentieth century; the sky scraper.

The hierarchical orientation of urban development in the world economy may have reached its zenith around 1880 but even before then, American cities had begun another
process towards redefining the symbols and culture of the built environment through the production of vertically oriented space, rather than the horizontally oriented space of London.

When describing the changing nature of urban form in New York in the 1870s, Scobey says we “…would be struck by another group of structures… some as high as eight or ten stories… Precursors to the skyscraper, these ‘business palaces’ housed the most powerful actors in the downtown economy… From such buildings New York’s capitalists and communications barons oversaw their rise to power; not surprisingly, the structures themselves came to symbolize the city’s imperium. ‘The old policy of conducting business in a rookery is dying out, and New York is building up a series of business palaces which will be without a rival in any city on the globe,’ one paper commented” (Scobey, 2002; pp.96-97).

This ‘symbolic capital’ of architecture was the appropriation of a particular architectural style to create an image of value and importance. “It conjured up memories of renaissance merchant princes and aligned cities with Venice and Florence as the centres of far-reaching commercial empires” (Dennis, 2008; pp. 274-275). The new urban form of image was a reflection back to the dispersed, corporate-national, urbanism of the Italian city-states, and not the architecture of imperial empire. Skyscrapers were built to impress, just as the great parks had been, but the impression was being driven by an economic necessity of private, corporate, institutions to make a public statement (Dennis, 2008; pp.178).
Returning to our forlorn red brick tower on President’s Street we can now begin to comprehend its somewhat odd history. As stated earlier, Baltimore stood on the cusp of becoming one of our emerging cities in the hierarchical organization of the world economy in 1880. However, it was not one of our largest 25 cities in the period and although it came close in 1880, that marked the high point of Baltimore in comparison to other cities, so that by 1900 Baltimore had fallen to the 40\textsuperscript{th} largest urban center in the world economy\textsuperscript{58}.

Baltimore in 1860 had directly competed with both its domestic and international rivals to create the symbolic space of Druid Hill Park but even 20 years later the city was unable to maintain the status race with its domestic rivals through the new symbology of tall, vertical structures of the emerging regime of accumulation. When describing Baltimore’s ‘financial aristocracy’ of high rises and waterfront playgrounds in 1990, Harvey stated, “If people could live on images alone, Baltimore’s populace would have been rich indeed” (Harvey, 1991; pp.237). This was no less true at the close of the nineteenth century than at the close of the twentieth. Baltimore had claimed an image under the cosmopolitan-imperial organization of 1860 but was unable to continue to compete in the new symbology of American corporate-national organization. And when you cannot directly compete, you lie and say you can.

Although the Phoenix Shot Tower had ceased to be the tallest building in the U.S. in 1846, that never stopped the city of Baltimore from claiming it still was. When new

\textsuperscript{58} Baltimore of course did not lose population, during the twenty years from 1880 to 1900, the city actually increased its population by over 50 percent. However, Baltimore lost position relative to other emerging and rapidly growing urban center both in the U.S., such as St Louis and Pittsburg, and internationally to cities such as Rio de Janiero, Leipzig and Dresden. If population is our proxy measure for power and wealth in the world economy, the city of Baltimore gained in absolute terms at the close of the nineteenth century but lost in relative terms.
buildings were erected elsewhere in the country with heights greater than the shot tower’s 234.25ft, the city simply increased the height of the tower on paper. Thus, at the close of the nineteenth century, different accounts of the Baltimore Shot Tower record different and contradictory heights. It has been remarked that not until the Empire State Building in New York was built at a height of over 100 stories, did the city of Baltimore and its residents cease to claim the status of tallest U.S. building, even though by 1890 both the Chicago Board of Trade Building and the New York World Buildings had already been completed with heights of over 300ft. If Druid Hill Park was the image from which Baltimore could claim equivalent wealth and power in the competition for capital of the 1860s, it could not replicate that relative status by the 1880s with the Phoenix Shot Tower. Thus, while Gad and Holdsworth are correct to argue that the modern skyscraper is a product of “corporate capitalism”, they are also “businesses themselves”; an image of symbolic capital and the business of urban development (Gad and Holdsworth, 1987: Willis, 1995).

When we began our view from Druid Hill we looked southeast, down the river valley to the Shot Tower. However, that view today is not a rolling and meandering river valley but a great elevated highway that cuts through the center of the city like a concrete scar, from the city’s northern border to the city center in the south. Although there are many points between the close of the nineteenth century and the crisis of capital in the 1970s and 1980s, that Harvey has detailed, I will focus on only two remaining historical points.

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59 Many places actually still record different heights for the Baltimore Shot Tower. Thus, the U.S. National Park Service provides a height of 234.25ft, while the Carroll Museums, who oversee and maintain the tower in Baltimore, claim it is only 215ft in height.

60 This story has been related to the author through personal communication with staff at the Carroll Mansion and Museum in Baltimore.
in the production of capital in the built environment of Baltimore. One that cannot actually be seen from our vantage point on the hill, the northern political boundary of Baltimore city, the other, the great grey scar that is euphemistically called the Jones Falls Expressway (JFX) which runs from beyond this unseen northern boundary to almost the water’s edge at the juncture of Fells Point and the Inner Harbor.

I have stated earlier that the U.S. regime of accumulation benefited from the distribution of its production and consumption functions across space and limiting the locational power of local political and social networks. In this way the internalization of transaction costs within the corporation facilitated freeing the logic of capital from the necessity of concentrated organization within the city.

Our view from Druid Hill provides us with a caption for this process. If one looks north from our vantage point at the Moorish Tower and were asked to identify the point of demarcation between the City of Baltimore and its surrounding suburbs, no one without prior knowledge of the geographical political boundaries of Baltimore would be able to tell where the city ends and suburbs begin. A contiguous built environment stretches before us far to the north and lost in the distance. Like our traveler to London more than a century prior, we could ‘despair of ever reaching the rim’. However, we can quickly reach the political boundary of the city by traveling some three and a half miles to the north\(^{61}\), to the line of the final annexation of territory by the city of Baltimore, and which marks the northern city limits just above Northern Parkway, established in 1918\(^{62}\).

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\(^{61}\) For reference, the distance between the Moorish Tower and the Baltimore Shot Tower was slightly less, at just over two and a half miles.

\(^{62}\) Hence the name, Northern Parkway. The previous boundary had been set by the street, North Avenue, making the historical identification of Baltimore’s northern changing limits quite simple to follow.
The actual legal closing of Baltimore’s borders is questionable. After the Civil War, the constitution of the state of Maryland was revised to require annexations between counties to be approved by a voting referendum; a requirement Baltimore City abided by, but was not specifically required because it was a city and not technically a county. This ambiguity lasted until 1948 when the state of Maryland enacted legislation which specifically prohibited the City of Baltimore from annexing territory without a special vote of approval from the residents living in the area of the proposed annexation, thus effectively ‘sealing’ Baltimore’s borders (Duffy, 2007; Rusk, 1996). It has been said that, “To put it simply: Question 5 turned Baltimore City from a shining jewel into a charity case” (Duffy, 2007).

From that time on, all new urban space surrounding Baltimore would be derived from new political entities in the counties; places which would politically and economically compete with the city for capital. The city could and did continue to grow; increasing its density and the concentration of profitable space, but it could never grow out to encompass the new built environments of speculation and organization on its periphery. Like London nearly two centuries prior, this process would create a political duality between the low-taxed suburbs of the middle and upper class and the high-taxed but impoverished urban center but under a relationship that was far more complex and intensive than anything envisioned in London.

Meanwhile, as one follows the Jones Falls south from the city line they no longer see the great green river valley, which the Olmsted Brothers company had deemed one of the great natural landscapes for the creation of parks for city residents and had sought to use to create a continuous green space through the heart of the city.
“Jones Falls, opposite Druid Hill Park: A picturesque valley which needs but preservation and accessibility…North of Union Avenue is a large low meadow not suitable for building land without very extensive filling. It is proposed to extend the limits of the suggested parkway so as to include this land, with the base of the adjoining hills to a line suitable for a boundary street, as it will not only be an attractive piece of landscape in pleasant contrast with the gorges above and below it, but it will serve to supplement the adjacent Druid Hill Park by providing a large area of nearly level land for sports, parades and so forth — an important matter in which Druid Hill is curiously deficient for a park of such size” (Olmsted Brothers, 1904; pp.80-82).

Even in 1961 developers saw “islands of opportunity to be linked by a continuous valley landscape… [where] areas of great beauty persisted; in places the valley is a narrow gorge; elsewhere it broadens into pleasant meadows; the built up areas are of marginal quality” (Potts, 1962; pp.33). Instead, the Jones Falls River has been transformed into a great concrete snake, the JFX, which many call a great scar, as it bisects the city of Baltimore north and south. However, this concrete scar serves a valuable purpose, “…linking the downtown with the extraordinary countryside and fast-expanding residential areas in the beautiful valleys of Baltimore County” (Potts, 1962; pp.34).
The Jones Falls River has always been a transportation and production corridor for capital in Baltimore, from the old water powered mills to railroads and streets which lined its embankments. But in the mid-twentieth century, the accumulation of capital in the built environment of the American city was already reaching a crisis. The costs of redeveloping the same space in the older portions of the city were much higher compared to the open and available space at its fringes. Just as we noted in Chapter 5, with Engels’ (1872) in the “Housing Question”, capital could not resolve this contradiction internally so it simply moved its centers of profit to create a new built environment within space; a temporary fix to an ever reproduced problem.

Just as there had been in London in the nineteenth century, there was a temporary solution to the limits of capital in the twentieth, a spatial fix where the ‘political duality’ of the organization of cities, subsidized by the state and its associated municipalities, including Baltimore City, created the multi-million dollar JFX\(^{63}\). If the political organization, through the prevention of annexation of the built environment of the metropolitan area, had begun the process of turning Baltimore from ‘a shining jewel to a charity case’, the creation of the JFX sealed it in concrete and asphalt.

The scar of Baltimore, which we see vividly from our perch next to the Moorish Tower, is the symbolic surgery to free capital from the spatial limits of its own creation; the political and economic reorganization of space to facilitate new rounds of capital expansion in the built environment at the expense of the older forms and population, left

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\(^{63}\) I have been unable to find estimates of the total, final, cost of the JFX due to the length of time over which it was constructed but the initial estimates were $45 million of which the city of Baltimore itself was obliged to pay $10 million. However, the estimates of the section of JFX that was never built, from its current terminus at President’s Street to its planned junction with I-95, were estimated to cost $1 Billion by the 1980s. It is somewhat ironic, looking back, that the city spent significant amounts of its own citizen’s money to subsidize the flight of capital from within its borders.
behind in the declining rubble of property which was no longer sufficient to achieve quality returns on investment but not yet devalued enough to be reorganized under a new logic of capital accumulation. More than any other fixture in the built environment of the city, the JFX stands as the symbol of dependence upon the new spatial organization of capital, where the city must beg, borrow and limp along in the hope that capital will one day return to it.

From our vantage point north of Downtown, we stand at a nexus of geography which allows us to comprehend the changing historical conditions of capital within the built environment of an American city. From the heyday of the British cosmopolitan-imperial regime of accumulation and the imitation of English gardens as the symbols of World City status, through the rise of the U.S. corporate-national regime of accumulation and the new symbol of urban status in the vertically organized structures of power, to the disarticulation of the political and spatial limits of capital from the city itself. Finally we are left with crisis of capital in the American city in the latter half of the twentieth century, the conversion of the ‘jewel’ city to the ‘charity case’ and eventually new opportunities for speculation and investment.

Now we have finally come full circle to the ‘financial aristocracy’ of Harvey’s Baltimore and the piecemeal dissection of Baltimore to ever more expensive and convoluted redevelopment projects; from the symbolic Disneyfication of the Charles Center and Inner Harbor of the 1960s and 1970s, to the political suburbanization of Fell’s Point and Federal Hill to Washington D.C. in the 1980s and 1990s, and finally its celebrated economic subservience to the “eds and meds” of the “next economy” (Vey, 2012). Not all of these new dynamics can be seen from our vantage point in Druid Hill Park, for the
glass and steel spires of capital now block much of our view to the south. So it is here we return to Federal Hill and David Harvey, but with the understanding that this is but the latest stage in the organization of space in the American city to the historical conditions of capital and its associated regimes of accumulation.
Section 7.5:

Spatial Fixes and the Ecological Marvel: The U.S. National City-System

In chapter 6, the ‘ecological marvel’ of London in the eighteenth and nineteenth centuries had set a model for suburban expansion as a spatial fix to the local limits of capital expansion of British capital, by generating opportunities for investment, income, and employment. But even London was not the origins of our spatial reorganization of urban space to overcome the contradictions of accumulation in the built environment. Recall that in Naples we saw a limited but highly successful reorganization and speculation in a new urban arrangement along the Chiaia. Here, luxurious Spanish estates were created under the protection of Iberian, Spanish, power and investment by Northern Italian, primarily Genoese capital. Liberated from the city center, the wealth of Naples could seek both political refuge from the increasing Neapolitan masses and provide themselves with a new venue for the temporary absorption of surplus capital through speculation in real estate, beyond the historical boundaries of the city itself.

However, this model was always limited by the very nature of its organization to create an isolated enclave of organization for the wealthy. The Dutch were able to shift this organization away from suburbanization in a central city through the revival of patterns of Venetian urbanization; by creating opportunities of investment and the reorganization of space throughout the ‘fortified island’ of the Low Countries. Multiple urban entities relieved capital of the requirement to find new opportunities for investment and speculation within a single built environment. The ability of the state to guarantee protection anywhere within the Republic ensured that opportunities for investment and
speculation, in the organization of land and labor, were diversified and dispersed throughout the seven provinces. Thus creating the origins of competing political, municipal, urban spaces for investment and speculation, under a larger container of power; the quasi city-nation state of the Dutch Republic.

Under the British regime of accumulation, the impetus towards urban centrality and organization was revived through the need for organization and control in the extensive world economy of British Empire. Under this condition, the strategy of dispersed urban space was limited by the concentrating need of capital to be proximally near the entrepôts of power and expansion. In this way, British capital expanded on the reorganization of urban space within the territorially defined, protected state, by reviving the process of explicit suburbanization outside the central cities, first in London, and then throughout the Empire.

If the London suburbs were the ‘ecological marvel’ of British capital, they were only the latest in an historical process of ever increasing conditions for a temporary spatial fix to the escalating need for new locations to absorb surplus capital through investment and speculation. In reviving the model of suburban development we initially saw in Naples, centered on the hierarchcial, primate cities, of imperial domination and control, the British regime expanded the suburbanization process through new organizations of land and labor. No longer were these spaces the exclusive domain of the wealthiest inhabitants fleeing the political, social, and economic costs of the central city. Instead, the new suburb of British capital was reorganized to provide social and political sanctuary for both middle and upper class members of the bourgeoisie in the property developments of the squares and ‘little towns’ at the ever increasing edge of the built environment. More
importantly, by expanding the social base of the suburb, the opportunities for speculation and investments were exponentially increased over the limits of the Chiaia in Naples. The ability of this expanded urban form to absorb surplus capital and provide significant returns was pushed to ever greater heights in the seemingly limitless Victorian suburb.

However, even this new form of spatial expansion in the built environment reached its limits as the contradiction between the low-taxed suburbs and the high-taxed urban center pushed ever greater costs and obligations back onto the state itself; the primate cities of British capital could only absorb so much surplus capital for so long.

It is under these historical conditions that the U.S. would emerge to reorganize speculation and investment in the built environment of the city by reviving the decentralized, heterarchical, structure of Dutch and Venetian urbanism from previous periods. By creating a continental sized national city-system with seemingly limitless municipal governments, the ‘ecological marvel’ of the suburb could be intensified around all cities, rather than mostly limited to the central urban spaces of political territoriality.

As we have already discussed, the decentralization of urban governance was a long standing trend in the development of the U.S. national city-system, so that by the close of the nineteenth century the number of municipalities, cities with more than 2,500 residents, had increased more than 7 times in just 50 years. Like Figure 7.3 which identified the increasing number of cities per capita in the U.S., Figure 7.4 allows us to see that the number of smaller urban centers, those with populations of less than 9,999, were being created faster than they could grow to become larger urban centers. The ratio of small cities to the overall number of cities in the US national city-system, shows a
clear, declining, trend through the nineteenth and twentieth century’s. This illustrates how the external urbanization around London and the primate cities of empire were internally dispersed in the U.S. continental city-system.

**Figure 7.2: Ratio of Small Cities, under 9,999, to Total Number of Cities in the U.S. (1850-1970)**


While much has been made of the rise of the suburb from the 1970s onwards, the true process of U.S. suburbanization began much earlier.

“The proportion of people living in the giant metropolitan areas – the seven cities with populations over three million

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*The counting of cities by the U.S. Census Bureau has changed numerous times. Therefore these values should be taken as a general trend and not as a specific historical condition. The graph stops in 1970 for two reasons. One, the US Census did not differentiate cities by population size in 1970 and thus no ratio could be produced for that year. Two, although the census resumed counting cities by population size in 1980, the definition of city had been changed such that the estimated total number of cities in the US in 1980 is 2.7 times greater than that reported in 1970. The dramatic differences in these counts before and after 1970 make any direct comparison worthless. However, the general trend of a declining ratio has continued from 1980 to 2010; albeit on a different scale to that observed from 1790 to 1970.*
– has declined by half a percent between 1970 and 1980. This latter shift, though slight, has caused considerable excitement and unease among urbanists. Some have termed the drop a new trend, one quickly labeled “coutuerurbanization” by Brian Berry. Clearly the trend is not new, but a half century old, having begun in the Depression years, but masked until recently by data that focus on the standard metropolitan statistical area (SMSA), as well as by the baby boom, postwar prosperity, and rural migration from the South to large cities” (Monkkonen, 1988; pp.73).

While Monkkonen is correct in arguing that the handwringing of American urbanists of the last 40 years is entirely misplaced, the overall trend having been obscured by the definitional organization of contiguous vs. political space in U.S. census data, even an analysis from the Depression years leaves one of the impression that suburbanization is a unique outcome of the twentieth century American city.

Lost in the headlong rush of the urbanization of the U.S. population in the twentieth century is the historical conditionality that led the U.S. city-system towards its current and recurring urban crises at the dawn of the twenty-first century. It is the ‘ecological marvel’ of British capital, through a revival of the politically dispersed, heterarchical urban form of the Dutch Republic. But a decentralized metropolis politically and socially scaled to a continental sized national city-system, far beyond what had been envisioned in Southampton Square by Thomas Wriothesley in the seventeenth century, so that the
historical connections have been all but washed away. Thus Fishman can astutely argue, “…the American middle class adopted the English model of bourgeois suburbanization so decisively that ever since Americans have been convinced that it was they who invented suburbia” (Fishman, 1987; pp.14).

In this way, a process of creative destruction, which was begun as soon as the first bricks were laid in place in the city centers of the Snowbelt, created the political, social and spatial conditions of perpetual reorganization and competition for capital within the nation-state.

“Postwar suburbanization and sprawl were different in scale but not really different in kind from what went before. In fact the sprawl of the postwar years was really just an extrapolation of the process visible in London since the seventeenth century or in American cities for more than a century, particularly in the boom periods of the 1880s and 1920s.

Nor were the highly publicized techniques of William Levitt and Levittown, as many writers have suggested, a new departure in American development patterns. Levitt was merely the most successful builder of his day in pushing further the process of reducing costs through large-scale production and standardization that had been underway at least since the beginning of the nineteenth
century. Levittown, although ingenious, was no different in kind from the work of large developers like Samuel Gross in late nineteenth century Chicago or the new subdivisions created by defense contractors in Los Angeles in the 1930s. So successful were these early twentieth-century builders…that already by the beginning of the war, well before the great postwar building, the majority of urban American households lived in areas that were suburban in character; and almost half owned their homes. High homeownership and suburban living was not a new postwar American development; it was an accomplished fact at the outset of the war” (Bruegmann, 2005; pp. 43-44).

Further, the base of suburbanization was proliferated to a scale of even greater heights to include approximately half the U.S. population as well as large scale commercial and industrial spaces. Suburbia was no longer just the symbolic retreat of the elite, as had been in Naples, or a sanctuary of production from labor, as had occurred in the Dutch Republic. It was not even the middle and upper class gentry who lived in the idyllic squares and small towns at the urban fringe of London. Suburbia was now the symbol of the entire middle and working classes and its associated production and consumption functions in industry and commerce.

The centralization, concentration, within the American city had not only ceased to be needed by capital, it was not even wanted by the majority of the American population. Well before the urban crisis of the latter half of the twentieth century, following the
conclusion of the Second World War, both people and capital had sought new urban space outside the central districts of the American city where the built environment could be made to better suit the new economic and political relationships of the dominant power in the world economy.

“Also contrary to a great deal of what has been written about the “Ozzie and Harriet” suburbs of the 1950s, American suburbs were not a uniform mass of white, middle-class bedroom communities. Some suburbs were primarily residential, but many were commercial centers, accommodating office buildings and factories for the expanding number of companies relocating from locations closer in. Many of these companies had already, during the interwar years, left loft districts immediately adjacent to the old downtowns of the older American cities to settle in landscaped industrial parks at the periphery of the central city… [R]egional shopping centers have been a convenient scapegoats for observers who lament the decline in vitality of the central city, but the malls only contributed to a process well underway before large regional centers started to appear” (Bruegmann, 2005; pp.44-47).

Politically, economically and socially, a vast new population was being offered the opportunity to physically and symbolically separate itself from undesirable populations; be it because of religion, race, or class status was irrelevant. This opportunity carried with
it the prospect of ever changing and expanding urban space where investment and speculation could occur without the costs or overcoming the previously existing built environment of the older core.

It is here that urbanists have missed the key contextual difference between the logic of urbanization and capital in the nineteenth century and that of the twentieth. If London was George Gissing’s (1897/2008) “whirlpool” and the basis of H.G. Wells (1900/2008) “whirlpool cities”, it was under the need for capital to concentrate near the manifestation of political power in the world economy under the structural logic of a cosmopolitan-imperialism strategy of accumulation. The perpetual conglomeration towards central urban spaces concentrated capital from where it could be best utilized to extend the world economy; for Britain and London this was how Arrighi’s nineteenth century world economy was ‘conquered’. The Victorian suburb was manifested from this but ultimately subservient to these great cities. The ‘ecological marvel’ was the ability to generate new economic and social space without surrendering political control (Rodger, 1992).

This is what Fishman is describing when discusses the ‘structural logic of the Anglo-American city’,

“Middle-class suburbanization thus entered into the structural logic of the expanding Anglo-American city. It formed an integral part of what Frederick Law Olmstead perceived to be ‘the most prominent characteristic of the present period of civilization... the strong tendency of
people to flock together in great towns.’ Suburbia might appear to be a flight from the city but, seen in the larger, regional context, suburbanization was clearly the outer edge in a wider process of metropolitan growth and consolidation that was draining the rural areas and small towns of their population and concentrating people and production within what H.G. Wells called ‘the whirlpool cities’” (Fishman, 1987; pp. 10).

However, the ‘whirlpool cities’ of H.G. Wells or the ‘great towns’ of Frederick Law Olmstead never really existed in the U.S. city-system as they had in its British antecedent. The American city was an inverse whirlpool which, even as it pulled in capital and new labor, it was just as quickly expelled towards ever widening fringes of spatial organization that competed both economically and politically since political control of the ‘great towns’ was no longer the central factor in the logic of capital expansion.

The continuous expansion of suburbia, our ‘ecological marvel’ imported from Britain so completely that the U.S. and suburbia have become nearly synonymous and by the expansion of the built environment across the continental economy. Under the ‘national developmentalism’ of the U.S. state, a new era of urban development and speculation could be achieved as the massive infrastructure projects of the New Deal era facilitated new opportunities for cities to be founded and for previous centers to expand. It was under the national city-system of the U.S. regime of accumulation that the Zipfian distribution of American urbanism was fully achieved as the Keynesian policies sought
the intensification of capital through the explicit project of “…equalizing the distribution of industry, population and infrastructure across national territories…” (Brenner, 2003; pp. 206).

This created the conditions for a process of almost continuous creative destruction where new built environments are not only created at the suburbs, the urban fringes, of the old core American cities but also in entirely new places within the continental city-system. The century’s long process of urbanization from the Northeast “rustbelt” to the Southwest “sunbelt” was the continuous devaluation of older forms of capital accumulation and wealth to new forms of accumulation in the built environment of the American city-system. At the same time, this allowed the constant separating out of labor so that only that part of the population most relevant to the logic of capital accumulation at any given time was politically and socially integrated into a specific urban economy while older urban forms became warehouses for the reserve army of labor; segregated both physically and politically from the new urban spaces\(^6\). 

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\(^6\) While part of the realization of the perpetual crisis of American cities in the latter half of the twentieth century was the movement of capital and people beyond the political demarcations of the city limits after World War II, this realization may have also been brought about by declining immigration into the U.S. which had artificially masked the exodus of people and wealth already well under way at the beginning of the twentieth century. There is an interesting correlation between the decline of U.S. foreign immigration, as a percentage of the total U.S. population, from 13 to 15 percent between 1860 and 1920, to an historic low of only 4.7 percent in 1970 and the perceived crisis and collapse of the city in the same period. This has been followed a steady increase to almost 10 percent by the close of the twentieth century, aligning with part of the perceived come-back of many east coast cities (Gibson and Lennon, 1999).
In contrast to London, which reigned as the largest city in the world economy for over 150 years, throughout the long nineteenth century, New York’s reign as the largest city in the world economy of the long twentieth century lasted a comparatively short 60 years, from approximately 1910 to 1970, when it was displaced by Tokyo. Much has been made of the rise of Tokyo and other so-called primate cities of the late twentieth century where massive continuous urban spaces have given rise to a new ‘unbalanced’ urban order. The rise of Tokyo itself was seen as an indication of this new urban order, rising to displace the U.S. with a population of some 23+ million inhabitants.

Under this condition, urban studies sought a solution to the seemingly “unprecedented shift from an international to a global economy during the 1970s and 1980s” (Friedmann, 1995; pp. 21). Among the many claims to a new and unprecedented turn in the history of urban development, Manuel Castells (1977) argued the non-industrial urban growth could not be equated with the same urban developments which had driven European and American urban development. Instead, the new urban development of the world was a form of “dependent urbanisation”, due to new social processes which were emerging.

The call for a new social process to explain the changing urban conditions of the latter part of the 20th century led to the development of two separate but also overlapping fields in urban research and explanation; the ‘mega-cities’ and the ‘world cities’, each operating in a different global context in an informational world. World cities exist within
this informational world, mega cities exist outside this world. However, there is a large amount of overlap where major urban centers may exist in both (Castells, 1996; pp. 404). Each field attempts to explain modern urban development under conditions of a new social process which is fundamentally different from that which preceded it but approaches the process from different macro-social concerns.

The current era of rapid urban growth and internationalization is now argued under “a new logic of concentration” where cities are both classified based upon their ‘function’ in the world economy but as seen as a “functional necessity” (Sassen, 1991). Within the development of a world market framework, what Castells called a ‘world economy’ vs a ‘world system’, cities are now the most important aspects/units of analysis (Castells, 1996). Urban networks, as clusters of cities, exist outside of state systems and structures and operate in a global economic system, a “world economy”.

This restructuring shift in the world order of cities “impacted both the international economic activity and urban form where major cities concentrate control over vast resources, while financial and specialized service industries have restructured the urban social and economic order” (Sassen, 1991; pp. 4). This restructuring of the global economy has lead to the decline of the industrial city in the first world, the rise of industrialization in significant regions of the Third World and the expansion of the financial industry into a global network. Thus Eric Slater (2004) has argued that during the 1990’s New York, London and Tokyo all reoriented themselves in the global banking system where New York specialized in equity trading, London in currency and Tokyo in banking deposits.
But what if this unprecedented concentration of population and urban growth was not a new logic of capital but instead the rise of national city-systems under the auspices of a U.S. systemic cycle of accumulation seeking an ever greater spatial fix to the limits and contradictions of its own growth?

In the previous sections, I have shown how the U.S. city-system emerged as a politically dispersed, heterarchical, urban formation similar to the Dutch Republic but scaled to the geographic level of a continental sized, national, city-system. In this way, capital was able to pursue a process of continuous creative destruction from the very inception of the U.S. nation state through the creation of an almost limitless number of cities. This organization perpetuated a constant spatial fix to Engel’s contradiction in the built environment of the capitalist city across the continent; but this too had its limits.

By the close of the Second World War, the U.S. had both the economic prosperity and the political world power to re-establish and expand world markets “through their conscious administration by governments and large business organizations” (Arrighi, 1994; pp.328). To accomplish this required the U.S. to initiate a massive redistribution “from the U.S. domestic economy to the rest of the world” (ibid). However, we know it was not to the ‘rest of the world’ but initially to specific areas of the world, the “development by invitation” of Wallerstein (1979).

The Marshall Plan to Europe served to re-establish the world markets of the old core, followed by the Korean War which “drew the Northeast boundaries of Pacific capitalism until the 1980s, while functioning as ‘Japans Marshall Plan’” (Cummings, 1993; quoted in Arrighi, 1994; pp. 338). Under this system a series of ‘national’ city-systems can be
seen to develop which, rather than overthrowing the urban world order of Zipf’s Law, actually strengthened it.

However, this understanding rests on a definitional contradiction of organization in the built environment of a national economy; the dispersal of political power amongst municipal organizations even as economic power may be concentrated within a contiguous built environment, the political definition of a city versus the economic agglomeration of the city. These two conceptual definitions of the urban form create two distinct understandings of the distribution of cities in the world economy in the latter half of the twentieth century. The seeming contradiction between concentration of economic power and the dispersal of political power is essential to the spatial fix of Engel’s “Housing Question” on a national and ultimately, global, scale; the freeing of capital from the constraints of space beyond even the territorial limits of the continental economy of the U.S. state.

If we accept the definition of economic agglomeration, bounding urban space by the contiguous built environment, we reach a conclusion of massive national concentrations where Tokyo has a population of approximately 23 million by 1970 while New York has a population of approximately 16 million. Further, these ‘mega-cities’, cities with populations of more than 10 million, were now exploding throughout the world.

However, if we maintain the political organization of urban space within national city-systems, on the assumption that internal political distinctions amongst urban space serves to create the conditions of competition for capital amongst municipal governments, we find a very different urban development pattern. Looking at Table 7.5 we see that within
the national city-systems of the United States, Japan, the European Union, and South Korea, we find a relatively equal distribution amongst the top 25 largest cities even at the close of the first decade of the twenty-first century\textsuperscript{66}.

Table 7.4: Distributions of Select National City-systems by Political Definition

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<tbody>
<tr>
<td>1</td>
<td>New York: 8,175,133</td>
<td>London: 8,360,369</td>
<td>Tokyo: 8,349,447</td>
<td>Seoul: 9,704,304</td>
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<td>2</td>
<td>Los Angeles: 3,792,021</td>
<td>Berlin: 3,538,652</td>
<td>Hangzhou: 5,689,603</td>
<td>Busan: 3,413,956</td>
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<td>Chicago: 2,685,808</td>
<td>Madrid: 3,265,630</td>
<td>Osaka: 2,606,371</td>
<td>Ishikawa: 2,602,255</td>
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<td>Rome: 2,818,842</td>
<td>Paris: 2,249,888</td>
<td>Osaka: 2,146,413</td>
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<tr>
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<td>Paris: 2,249,888</td>
<td>Osaka: 1,944,484</td>
<td>Osaka: 1,601,059</td>
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<td>Phoenix: 1,445,032</td>
<td>Bucharest: 1,019,045</td>
<td>Hiroshima: 1,544,073</td>
<td>Hiroshima: 1,466,293</td>
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<td>San Antonio: 1,327,497</td>
<td>Hanover: 1,013,547</td>
<td>Tokyo: 1,474,473</td>
<td>Ulsan: 1,092,167</td>
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<td>San Diego: 1,307,402</td>
<td>Vienna: 1,777,353</td>
<td>Fukuoka: 1,463,920</td>
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<td>Dallas: 1,157,815</td>
<td>Budapest: 1,714,041</td>
<td>Hangzhou: 1,415,678</td>
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<td>Zhengzhou: 1,045,908</td>
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<td>Enschede: 574,828</td>
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<td>Memphis: 646,019</td>
<td>Stockholm: 914,021</td>
<td>Shenyang: 717,326</td>
<td>Pohang: 511,390</td>
</tr>
</tbody>
</table>


\*Data derived from national censuses in respective countries from online databases.

Under the auspices of U.S. hegemony in the world economy of the latter half of the twentieth century, national city-systems were developed which, from a political governance perspective, share remarkable similarities. Although the larger urban economic agglomerations show a cluster of, so-called, mega-cities which dominate the urban distribution within these nations, they are not politically integrated organizations capable of organizing and regulating capital within the built environment. Only within

\textsuperscript{66} I have taken the entire European Union as a single, national, city-system as part of a complete project undertaken, originally under the Marshall Plan, and continued over the past several decades, to create an integrated market, demographically equivalent to the U.S. The fact that the EU is politically fragmented and potentially fragile benefits an organizational form where labor and capital are relatively free to move but overarching governance structures, especially municipal ones, are often tightly restricted.
the political jurisdictions of the city proper is capital subject to equal conditions of regulation and restriction of movement. Outside and between these jurisdictions of the city proper, it is the municipal governments themselves who are regulated and restricted by the movements of capital.

Before the expansion of capital reached its limits in the continental expansion of urban space, and likely precipitating and exacerbating the perpetual urban crisis of American cities in the second half of the twentieth century, U.S. capital had moved to recreate and intensify the world market of capitalism, which had been disrupted with the terminal crisis of the British Empire. In doing so, it recreated the conditions for investment and speculation within the built environment of national city-systems external to the U.S. state; conditions where urban governance was dispersed to facilitate organizational strategies of the transnational corporate organizations and the competition for capital between cities and municipalities.

However, these national city-systems were more limited, both demographically and territorially, than the U.S. and therefore could not generate the seemingly limitless opportunities for creative destruction which capital had enjoyed in the U.S. since the mid nineteenth century. Further, the creation and resuscitation of city-systems and competing corporate organizations that were external to the U.S. itself, ultimately intensified the crisis of capital and the ability of U.S. capital to achieve even greater rounds of expansion through investment and speculation in the built environment. The urban crisis, which had steadily been building in the U.S. for nearly a century, accelerated to a break-neck pace in the closing decades of the twentieth century, devaluing urban redevelopment projects as soon as they were built, constantly seeking new spaces to ‘re-develop’, while at the same
time demanding greater and greater subsidies from municipal and state governments both at home and abroad to ensure their profitability.

Thus, in Japan, regional development of postwar Japan was initially concerned with non-metropolitan areas to “resolve problems of regional imbalance” (Machimura, 1992; pp. 118) but by the early 1980’s, the Nakasone administration specifically targeted urban development as the central lynchpin to increase domestic demand. “The fact that the first and most direct impetus to urban restructuring had come not from inside the city but by the choice of national government put a specific limit on the development policy” (ibid; pp.119).

This is further illustrated in Figure 7.6 where the logged values of the 25 largest cities in each of the selected national city-systems are compared to one another, yielding similar ‘zipfian’ slopes even in the twenty-first century.

**Figure 7.3: Logged Distributions of Select National City-systems by Political Definition**
The rise of Tokyo as the world’s largest city in 1970 was a harbinger of the crisis of capital under the U.S., corporate-national, regime of accumulation but was not the collapse of the regime to an immediate new global urban order. While the “spatially dispersed, yet globally integrated organization of economic activity” has emerged on a even more intensified scale than that which existed in the mid-twentieth century, it has not “created a new strategic role for major cities” (Sassen, 1991; pp. 3) nor the “unprecedented shift… to a global economy” (Friedmann, 1995; pp. 21). It is the scaling of the U.S. corporate-national regime of accumulation, the creation of dispersed national city-systems, as the spatial fix of capital accumulation becomes ever more acute. The perpetual urban crisis of the latter half of the twentieth century is part and parcel of the redistribution of capital across ever greater spatial dimensions seeking new rounds of expansion within the built environment of the national city-systems of the intensified world economy.
Chapter 8:

The Rise of Zipf: Urbanization and the Rank-Size Rule in the Long Twentieth Century

As framed in Chapter 1, a central premise of settlement size hierarchy rests on what is commonly termed Zipf’s Law; a steady state distribution of cities in a geographic area which forms a power law (Gabaix, 1999). George Kingsley Zipf, an American linguist, outlined a universal law of complex systems; originally formulated to quantify the relative commonness of words in language through a rank-size relationship but was quickly recognized and applied to the distribution of city sizes (Saichev, 2010).

Zipf (1949) himself, specifically identified the rank-size relationship to the distribution of city sizes conforming to a power law; where the size of a city is inversely proportional to its rank. “[W]e argued that when communities are ranked, r, in order of decreasing P population size, they will follow… (viz., \[r*S^q = K\])^67, with values of r being integral and positive, and, of course, the value of q being positive” (Zipf, 1949; pp. 374). Thus, the probability \( P(s) = Pr\{S>s\} \); meaning that the value S, the size of a city in the urban distribution, is greater than s with the probability density function \( p(s) \) exhibiting a power law dependence \( p(s) \sim 1/s^q \) (de Vries, 1984; Gabaix, 1999; Black, 2009; Saichev, 2010).

Zipf (1949) applied his equation to the distribution of the 100 largest metropolitan districts in the United States using the 1940 national census to obtain a regression line of \( y = -0.9835 \log x + 7.05 \).

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^67 Zipf’s actual formula is \( r*S^q = K \). I have substituted the variable P for S for consistency and clarity in reference to other materials.
“Since the negative slope of this line is equal to the positive value of \([q]\)…we may say that the value of \([q]\)… is approximately 1.00 (a legitimate value for our observed -.9835 slope with a probable error of .04). The antilogarithm of 7.05 is about 10 million, which is theoretically the population of the largest Metropolitan District (New York)… The above \(p = q = 1\) value can be expected to be found in all our equations that refer to U.S.A. populations at approximately 1940” (Zipf, 1949; pp. 376).

Throughout the twentieth century this relationship has been noted and examined by numerous scholars from George Zipf (1949) to Brian Berry (1961) and more recently to Paul Krugman (1996) and Edward Glaeser (2010) to name a few. Each of these scholars noted the consistent relationship of the rank-size distribution within nations for much of the world economy with noteworthy outliers. Many of these scholars have come to treat Zipf’s Law as a stochastic process whereby urban growth is proportional to urban size.

This theory and its associated assumptions rest almost exclusively on relatively contemporary evidence; that is evidence from the latter half of the nineteenth century through the twentieth century. Indeed, even nearly three decades on, de Vries criticism of the study of city-size distributions still remains valid.

“The assertions made about the dynamic properties of the size distribution of cities... are either based on historical studies spanning at most several decades, or, more
commonly, on cross-sectional comparisons. Most social scientists regard modern urbanization as a relatively recent phenomenon. Moreover, the geographic literature of rank-size distribution speaks to the phenomenon of pre-industrial urban systems only indirectly, via the shopworn assumption that presently less-developed economies share features of developed economies in their pre-industrial past” (de Vries, 1984; pp. 88-89).

Zipf himself went on to examine urban distributions in other temporal and geographic conditions, to outline conditions of stable equilibrium, cases where \( q \) was equal to 1 and conditions of unstable equilibrium, where \( q \) was either much greater or much less than 1. Among them, Germany was found to be moving towards equilibrium as the German state became integrated from its separate components. While Austria-Hungary was found to be in an unstable equilibrium precisely because of the existence of two primate cities, Vienna and Budapest, which were disproportionately monopolizing ‘national’ resources.

“[T]he two cities Vienna and Budapest dominated its intellectual, financial, political, and social life almost completely. Not to live in one of these cities meant to forego opportunity to have a great many of the different goods and services of the country…we can understand how the population of these two capitals would grow at a disproportionately greater rate than the rest of the country, since by and large the rest of the country was expending
work without a commensurate reward” (Zipf, 1949; pp. 428).

Not surprisingly, British cities are also identified as being an especially unstable equilibrium by Zipf, first in 1920 under the British Empire and then in 1949 with the empire breaking up:

“Today India is breaking away politically from Britain, and Canada is virtually independent. Without the inclusion of the Indian and Canadian populations in the Empire, both London and “Greater London” will be even more out of line with what remains of her empire. Theoretically, this disproportionately large size of London – and for that matter of Great Britain – will result in one or both of two things: the decrease of the British population by death or migration, and/or the findings of new supporting terrain” (Zipf, 1949; pp. 439-440)68

However, this is not a symptom of overurbanization but the result of the specific condition of urban development under the cosmopolitan-imperial systemic cycle of accumulation. The development of cosmopolitan imperial space, first under the Genoese-Iberian regime and the organization of concentrated urban centers such as Naples and fully brought to fruition by the expanded imperial empires of European capital; most notably in the national and imperially centralized metropolis of London.

68 By London, Zipf is referring to the political boundary of London, its official population. “Greater London” refers to the total metropolitan area of London beyond the political boundary of the County of London; the contiguous built area.
Thus, while Portes and Walton (1976) are correct in asserting that much of the hierarchical urbanization of Latin America in the world economy in the twentieth century was the result of colonial domination beginning the sixteenth and seventeenth century’s, it is more accurate to understand hierarchical urbanization is the result of conditions of historical capital regardless of its geographical orientation.

“This pattern of colonization, the direct opposite of the British gradualistic model, permitted Spain to conquer and control an entire continent in a few years with a very small occupying force…Gradually, cities abandoned the role of military enclaves for imposing European authority and became integrated as the administrative, economic, and cultural centers of vast regions” (Portes and Walton, 1976; pp.8).

The urbanization of the United Kingdom and France or that of Naples is just as much the historical legacy of specific strategies of capital accumulation as that of Latin America. Further, the emergence of heterarchical urbanization patterns in nations throughout the twentieth century does not imply these city-systems developed without dependency or exploitation. Urban development under all systemic regimes of accumulation entails a strategy of redefining urban space to achieve an organization from which the expansion of capital itself can be most successfully achieved. Colonial domination through primate cities was a specific manifestation in the historical legacy of the cosmopolitan-imperial regimes of accumulation. Weak, decentralized, heterarchical forms of urbanization are
the specific manifestation of the historical legacy of corporate-national regimes of accumulation.

If Zipf’s Law and an empirical understanding of rank-size distribution in urban development are to be more than the “mathematical curiosity” of Hohenberg and Lees (1985), then we must understand the temporal dimensions of Zipf’s findings under a larger, more macro-historical analysis of urbanization and capital organization.

Through this macro-historical perspective, the distribution of the world’s largest cities has moved back and forth through time between hierarchy and heterarchy; a seemingly rhythmical pendulum of oscillating organization. However, this pendulum-like movement closely corresponds to the systemic cycles of accumulation which have spanned the past several centuries. By comparing the underlying logic of capital accumulation under each of these systemic cycles, the logic of uneven urban development and capital accumulation in the built environment of cities is laid bare.

Urbanization is not a steady state, stochastic process. Its underlying logic of organization is dependent upon investment and speculation of capital within the built environment and thus the concentration or decentralization of urbanization is the outcome of specific strategies of spatial organization to extract surplus value from the world economy. Further, these transformations between hierarchy and heterarchy do not highlight cyclical processes but structural transformations where the containers of power and the governance of urban space are central to the increasing complexity and scale of urban development in the world economy.
A comparison of the regimes of accumulation and the associated movement between intensive and extensive strategies, requires the comparison of urbanization and urban organization between both the current strategy of urban transformation and its preceding structural equivalent due to the double movement of historical capitalism. Thus, to understand the historical conditions and the manifestation of Zipf’s Law under the U.S. regime of accumulation requires us to understand the structural transformation from hierarchy under the British regime but also to compare the new structural organization of U.S. urbanization to the preceding Dutch strategy of city building.

In the previous chapter, we saw the overall shift in the world’s distribution of largest cities from the close of the nineteenth century through the close of the twentieth century in Figure 7.1. Throughout the long twentieth century, the distribution of the world’s largest cities became steadily more heterarchical. This highlighted the structural transformation of the urban world economy from a strategy of urbanization by concentration, where the concentration of key functions of the world economy were centered within specific manifestations of urban organization, the primate cities of British capital and Empire, to a strategy of urbanization by decentralization, the city-systems of the U.S. and its associated nation states.

If the nineteenth century was a story of the British regime of capital accumulation ‘conquering’ the world economy by imperial expansion, the twentieth century has been the story of the U.S. regime of accumulation ‘consolidating’ the world economy into a system of ‘national markets’. Under the British cosmopolitan-imperial strategy of organization, key urban spaces functioned to facilitate the needs of capital to create domestic and imperial markets by destroying the older structures of urbanization and
organization in the world economy. Under the U.S. corporate-national strategy of organization, markets were dispersed throughout multiple, territorially defined, city-systems through which its transnational corporations could achieve profits by exploiting the locational competition between cities, first in the continental sized national economy and then through its ‘development by invitation’.

Zipf’s law then works for the United States because of the historical conditions of capital accumulation which developed and organized both by the nation state itself and by the conditions under which it emerged prior to the twentieth century. However, to fully comprehend the increasing complexity and scale of urbanization requires us to go one step further by comparing the U.S. city-system to its closest historical ancestor, the heterarchical organization of the Dutch Republic.

By comparing U.S. urbanization and urban development to the Dutch Republic and even the Venetian city-state we are able to hold constant the underlying strategy of accumulation and highlight the changing level of complexity and organization which becomes distorted and obscured in a direct comparison to previous regimes of accumulation; comparing the U.S. regime to the British highlights the structural transformation of its strategy but at the cost of understating scale, since the urban primacy of an extensive regime overwhelms the urban egalitarianism of an intensive regime.

Thus, to understand the rise of the national city-system of the U.S. in the twentieth century requires an understanding of the rise of nation states as containers of power for the city-systems of capital accumulation which first emerged under the Dutch
‘decentralized metropolis’, were expanded by the United Kingdom of Great Britain, under the auspices of London, and finally brought to fruition by the United States itself. The Dutch quasi-nation state was capable of creating a protected territorially defined space in the Low Countries of Northern Europe, where the still semi-independent, quasi-city states, engendered the conditions for a heterarchically organized structure of urbanization where there was little locational necessity to embed into any one built environment but rather to disperse urban development in such a way as to maximize speculation and investment within the territory.

The recurrent urban crises of the past several decades are part of a larger, perpetual, urban crisis to reorganize and reformulate the built environment to suit the strategies of capital accumulation. Combined with the locational movement of the center of capitalism, from the Mediterranean, through Northwestern Europe, and across into North America, this constant development and redevelopment of urbanization has left us the historical landmarks to retrace the origins of modern urbanization and outline possibilities for the urban world of the twenty-first century.
Section 8.2:

Detroit Redux?: The Greatest American Urban Disaster Part II

The city of Detroit has been a poster child for the urban crisis of U.S. capital for the past several decades, culminating in the possibility of financial bankruptcy, for which it has recently applied. The press has declared Detroit “America’s greatest urban disaster” (New Republic, December 9, 2009) and the current bankruptcy as “Detroit’s Reckoning” (The Detroit News, July 19, 2013). Much is being made of the ‘largest municipal bankruptcy’ in U.S. history.

But what if this is not the largest city to default in U.S. history? Although it is the largest default in dollars in U.S. history, with estimates of between $14 and $18 Billion dollars in outstanding debt, the city of Detroit is a shadow of its former self with a population of just over 700,000 inhabitants making it the eighteenth largest city in the United States.69

However, 80 years prior, the fourth largest city, by population, defaulted on its debt. With a population of just under 1.6 million inhabitants, the city of Detroit defaulted on its debt in February of 1933 during the fiscal crisis of the Great Depression, making the city of 1933 still the largest municipal debt default, by population, in U.S. history.

The city of Detroit then, stands at an apex of urban crises in the transition from hierarchy to heterarchy, at the beginning of the last century, and in the possible transition from heterarchy to hierarchy, in the new century. The different likely outcome for Detroit, under two distinct periods of capital accumulation, offer a unique comparative-historical

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69 This is the population of the political boundary of Detroit City. The contiguous urban metropolitan region is still one of the largest in the United States with the Combined Statistical Area Population in 2010 of approximately 5.2 million inhabitants (U.S. Census Bureau, 2013), making it still the 11th largest metropolitan region in the nation.
case study of the changing political and economic conditions of urban development in the U.S. city-system at the turn of the new century.

Detroit, in 1933, was the fourth largest city in the U.S., just behind Philadelphia, and part of the rapidly expanding city-system of the new U.S. corporate-national regime of accumulation of which New York had just surpassed London as the largest city in the world economy. Detroit was the sixteenth largest city in the world economy, just behind Manchester and Birmingham, but now larger than either Glasgow or Liverpool in the British nation state and larger than any of the former British imperial cities, including Calcutta.

As shown in the previous chapter, under the U.S. corporate-national regime of accumulation, urban development was dispersed across a continental sized national economy where the logic of capital accumulation could be subjected to the economizing logic of corporate enterprise. This created an integrated urban development pattern, within the nation state, which allowed for the specialization of urban functions to suit the specific needs of capital for the accumulation of profits. Urban development was centered on the intensification of capital accumulation through the decentralization of the built environment within national city-systems. Detroit was a poster child for such urban development; a city that performed a specialized function within the logic of capital, built around a specific production process, with the creation and expansion of the auto industry, under the auspices of the rising center of the world economy, the U.S.

However, when the Great Depression began in 1929, this same economizing logic also made it highly susceptible to a crisis of profitability, as demand for automobiles and
trucks plummeted. Thus, more than some of the other largest cities in the U.S. during this period, Detroit was particularly devastated by the collapse in production and the massive pullback by capital to preserve itself during a time of crisis. By 1933, it is estimated that some 400,000 residents of Detroit were unemployed, many in the automotive industry with nearly 80% of the city’s automotive industrial capacity lying idle. Ford Motors would lose $75 million dollars in 1932 alone and the city’s tax revenues would be reduced to a fraction of their former value as property foreclosures and devaluations became rampant (Bryan, 2013). This finally culminated in the Michigan bank crisis in February 1932 as two of the largest banks in Detroit, First National and Guardian National, became insolvent.

Initial attempts to convince corporate capital to save Guardian National, specifically the U.S. government’s attempt to persuade Henry Ford to refinance the bank and back new federal loans as the largest creditor of the two institutions, failed. This was at least partially due to the Ford Motors already substantial losses in the preceding years but was exacerbated by the threat of Henry Ford and Ford Motors to immediately withdraw all deposits from First National, a sum of some $25 million, when he was presented a plan to subordinate the $7.5 million in deposit liabilities Ford Motors then held with Guardian National. In attempting to avert the crisis of Guardian National, the threat of Ford Motors to withdraw from First National escalated the liquidity crisis of the banking system (Awalt, 1969).

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70 It is interesting to note that Roy Chapin, then Secretary of Commerce, but previously the president of Hudson Motors, openly discussed with Henry Ford how automobiles had moved from being thought of as a class of consumer goods to a capital expenditure during the Depression (Awalt, 1969).

71 In the discussion between Henry Ford and Roy Chapin, Awalt (1969) recalls two very different viewpoints. Chapin, as a fellow businessman and automobile manufacturer, pleading with Ford to
This led the governor of Michigan to declare a bank holiday on February 14, 1933, ostensibly to prevent Henry Ford from withdrawing the $25 million in funds from First National but more importantly to stem the wholesale collapse of the Michigan banking system. Although initially only set to close for eight days, Michigan banking and specifically the Detroit banks would remain closed for thirty-six days, first under the governor of Michigan and then under the Emergency Banking Act of 1933 under President Roosevelt (Bryan, 2013).

It was during this time that Detroit, the fourth largest municipal government in the United States, with a population of nearly 1.6 million inhabitants, would default on its debts and become insolvent. Specifically, with the bank holiday in full effect, the city was unable to procure new loans and refinance existing debt payments for over a month, accelerating a crisis that had been well underway for years due to declining tax revenues and escalating public service costs within the city.

However, the default of Detroit is barely remembered in the history of U.S. urbanism and its associated development for several reasons. Both the banking and escalating social crises in Detroit were a microcosm of the urban crisis throughout the United States during the period and offered both the catalyst and opportunity for the U.S. government to fully initiate and engage in a ‘national developmentalism’ through the use of Keynesian economic theory. The crisis of profitability in the material expansion of capital could be overcome by the creation of a national economic system whereby the nation state would understand the escalation of the crisis would lead to even greater manufacturing losses and Ford’s response that the crisis would be a good thing to discipline both the market and the worker and if he, Henry Ford, were to lose Ford Motors in the crisis, he was still young enough to rebuild a new business on its ashes.
heavily subsidize the costs of reproduction and urban development, first through the creation of new social services which released cities from the costs of poor relief by aggregating them to the national level and second by massive federal investments in infrastructure to continually create new spaces for urban development and investment.

The banking crisis of 1933 offered the newly inaugurated President Roosevelt a clear crisis to implement far reaching changes in the relationship between the U.S. federal government and its associated state and local organizations, what is famously now understood as the welfare state. While the role of the banks has been well understood, it has been speculated that it was the crisis of Detroit, more than the specific banking crisis, which was the ultimate catalyst and platform to launch the New Deal programs (Monkonnen, 1988).

The banking crisis had an indirect effect upon a large proportion of the U.S. population, Governor Comstock of Michigan famously said he would ‘get along’ when he signed the bank holiday into effect with only $30 in his pocket.

“And "I'll get along" represented the reaction of the citizens of Michigan to the Governor's order declaring a week's holiday closing the banks of the State because of the crisis in the affairs… In general people were cheerful as they planned to get along without bank checks for a few days. "Sit tight, all is well," was the concluding recommendation in a front-page editorial in the Grand Rapids Herald” (Literary Digest, 1933).
Whereas the potential collapse of Detroit was an immediate effect upon millions and a harbinger of many, if not all, cities in the U.S. It was here that the ‘national developmentalism’ of the U.S. regime of accumulation was ushered in under a crisis of the built environment and capital accumulation. Under these auspices it further expanded and propagated a dispersed urban spatial arrangement of heterarchy, whereby cities could specialize in certain aspects of material expansion and large scale corporate entities were able to fully subject the built environment to the economizing logic of capital organization, all subsidized and coordinated by the national government of the United States. The crisis of Detroit in 1933 was not the collapse of the U.S. urban form under the structural logic of U.S. capital but its final triumphant birth from beneath the waning fortunes of the British regime where the national city-system of a continental sized economy was fully reorganized.

It is under these conditions that New York emerged as the largest city in the world economy in 1930 and it is under these same conditions that despite this prolonged crisis, which would continue for several years beyond the peak of the bank crisis of 1933, the population of Detroit continued to increase throughout the following decades, reaching over 1.623 million inhabitants by 1940 and nearly 1.9 million inhabitants by 1950. The urban crisis of the 1930s was overcome by the full implementation of the U.S. city-system and ultimately did little to slow the wholesale urban development and its associated national distribution.

In contrast, the urban crisis of the late twentieth century followed a distinctly different path, although Detroit is once again our example par excellence. Although the intervention of the U.S. nation state facilitated the rise and expansion of American cities,
following the crisis of capital in the 1930s, it would be unable to repeat this process by
the 1970s and 80s as the logic of capital and the organization of the built environment
under a national strategy reached its scalar limits.

As I have outlined in the previous chapter, the limitations of a continuing spatial fix to
the urban investment and ‘national’ development strategies of the past century and to the
(re)creation of its own national rivals in Europe and Asia, the opportunities and
advantages for continuous urban redevelopment were steadily reduced throughout the
twentieth century.

The crisis of the city was no longer a crisis of economic production but a crisis of
economic restructuring, the process of de-industrialization, as the old core of the U.S.
urban economy was devalued and abandoned in the face of rising infrastructural and
labor redevelopment costs. Just as we saw central London steadily devalued and
abandoned to the suburbs, so too was the American city. Further, the ‘national’ model of
the Keynesian developmental welfare state was reproduced throughout the world
economy wherever the U.S. sought strategic support for its new world order,
Wallerstein’s “development by invitation”.

Instead, urban development has been altered by a new logic of capital accumulation.
Although predicting the future direction of urbanization, based on history alone, is
problematic, the possibility to inform and infer the current, ongoing, urban restructuring
is promising. As outlined previously, the possible restructuring of urbanization and
capital accumulation in the built environment may be best served by looking at the
reorganization of cities under the British regime of accumulation in the eighteenth century, rather than the American regime in the twentieth.

The current shift in the direction of urban hierarchy in the world economy, outlined earlier, with the rise of the mega-cities and the attempts to reclassify urban development as ‘world-cities’ point towards a new double-movement. A reorganization of the built environment which supersedes the U.S. regime of accumulation by a revival of the organizational structures of the British regime of accumulation; the agglomeration and concentration of economic, political, and social activities within large scale urban centers. Just as the U.S. regime of accumulation superseded the British regime of accumulation by reviving the organizational structure of the Dutch ‘decentralized metropolis’ but at a continental, rather than quasi-national scale; a new regime of capital accumulation in the twenty-first century may successfully supersede the U.S. regime of accumulation by reviving the concentrated urban formations first seen under the Iberian-Genoese, as a form of dependent urbanization, and taken to a new scale by the British national capital in London and its associated Imperial dependencies.

However, the double-movement is the process of going backward and forward at the same time. Backwards, by reviving the organizational structure of the previous regime of accumulation, and forward, by expanding the size and scale of the process in the world economy of capital. If the U.S. intensified the logic of capital by a process escalating the nation state to a continental sized economy and then replicating it globally through its ‘development by invitation’ to create a group of national city-systems, a new urban formation will likely ‘extend’ the world economy to create a supra-national organization.
where the agglomeration of urban centers can reintegrate and reorganize the process of accumulation and competition on a more truly global level.

Neil Brenner (2004) argues that the neoliberal project from the 1980s, characterized as ‘Rescaled Competition State Regimes (RSCR), constitutes the reorganization and development of uneven urban spatial distributions under a new regime of logic. “In neoliberalized political systems, such policies are justified through the contention that stable macroeconomic growth will be secured as local and regional economies are forced to compete on the basis of their supranational market positions” (Brenner, 2004; pp. 262). For Brenner, this is fundamentally different than the logic of spatial Keynesian through the welfare nation states which sought to mitigate intra-national urban inequalities.

Just as Harvey (1989) has argued that urban ‘entrepreneurialism’ changed the direction and organization of spatial strategies of urban governance causing urban systems to become more vulnerable and prone to crisis, Brenner is arguing that the new urban formations which began emerging in the last decades of the twentieth century are fundamentally different. But they are only fundamentally different to the strategies of the U.S. regime of accumulations city-systems. Harvey’s (1989) “urban entrepreneurialism” and Brenner’s (2003)“glocalization” are the revival of cosmopolitan competition and the explicit breakdown of the urban decentralization of the twentieth century fostering the mega-cities of both the Global North and Global South.

This is the true crisis of Detroit, as a city whose structural success was built upon the distribution of economic and social functions under the U.S. regime of accumulation in
“The problem with this post-industrial urban model is that it strongly favors generalist cities that can cluster different kinds of soft and hard amenities and human capital. Indeed, the growth dynamic can be so strong for some successful cities that they can hollow out smaller rivals (for example, London vis-à-vis the cities of northern England).

Some specialist cities could also do well in this world. But, as Detroit, with its long dependence on the automotive industry, demonstrates, cities that are dependent on a single industry or on a temporary location advantage may fare extremely poorly” (Sanyal, 2013).

This does not mean Detroit is dead, far from it. Like its post-industrial brethren in Cleveland, Pittsburg, or even Baltimore, decades of devaluation and disinvestment in its core has left it a prime candidate for the return of capital and the flowering of a new ‘golden age’ of urban redevelopment and gentrification where city planners, politicians, and financials can congratulate themselves for saving the city while making a tidy profit; as Engels’ self-fulfilling prophecy returns again.

Already, policy advocates and institutions, such as Bruce Kratz of the Brookings Institution, are advocating a new blueprint for the revival of Detroit under the New Economy of the “eds and meds”. “Now is not the time for investors outside Detroit
merely to observe or monitor the dramatic intervention of the state and the bankruptcy process. Rather, this is the time to engage in a productive and creative fashion” (Katz and Bradley, 2013b).

“This resurgence of Detroit’s core builds off the physical ‘bones’… of the city and the enviable assets in the broader metropolis, including a relatively high concentration of workers in STEM…fields…

And the resurgence is stewarded by the leadership of re-energized networks of philanthropies like the New Economy Initiative, as well as the work of capable institutions like the Detroit Economic Growth Corporation, Midtown Detroit and Invest Detroit…” (Katz and Bradley, 2013a).

In building off the ‘bones’ of old Detroit, property and labor has become sufficiently devalued that investment in the built environment of the city may once again be profitable. Further, the political reorganization of the city is achieved by shifting the governance for the urban resurgence from the city itself to subject it even more to the economizing logic of the corporate enterprise. “The federal government should move quickly to either shift responsibility for the allocation of these funds [Development Block Grants] out of the city government to a capable partner, like the Detroit Economic Growth Corporation…” (Katz and Bradley, 2013b).
But the city of Detroit and all the second and third tier places of the national city-systems will never achieve the relative size and importance they once held. Detroit may one day have more than 1.5 million inhabitants but it will be long after a few of the new mega-cities of cosmopolitan capital will have reached populations in excess of 30 or 40 millions.
Section 8.3: A New Urban Hierarchy?

Alternative Urban Formations and the New Limits of Capital in the Twenty-first Century

“Detroit’s fate should serve as a warning, not only for China, but for the next generation of urbanizing countries (for example, India) as well” (Sanyal, 2013). Sanyal is correct that Detroit is a warning but not for the reason he thinks. Detroit does serve as a warning about the limits of capital accumulation in the built environment of the U.S. city-system. Perhaps reaching a final tipping point in the devaluation of the old core centers that capital flows will finally reverse the ever expanding spiral outwards, our reverse whirlpool, and return to the old city center.

But this serves as a warning to Chinese urbanization only in the sense of the limits of the U.S. regime of accumulation and the need to find an alternate basis for capital expansion in the twenty-first century. The decentralization of urban space in the twentieth century has reached the limits of its ability to function as centers of an intensified world economy. A new extension of the basis of capital accumulation must be found to achieve the next spatial fix which indicates a movement toward urban concentration, hierarchy.

The new supranational organization, already begun under the auspices of the U.S. nation-state with the development of large scale, trans-national, corporations, which have been replicated throughout the world economy, creates a new structural condition that favors the ‘generalist cities’ that can utilize their regional positions to compete in an expanding world economy. Generalist, in this context, means the concentration of capital, labor, and political-economic power into specific urban spaces from which competition within and
between regions in the world economy can be directed to produce the most profitable conditions for capital expansion and which supersede the spatial limitations of the older national city-system.

These generalist, cosmopolitan cities, are both the world cities of the Global North and the mega-cities of the Global South. Just as London and its colonial sentinels offered a dependent urbanization which subsidized the great imperial metropolis itself, the global slums of the Third world offer a dependent urbanization to the rising quasi-imperial metropoles of the First World.

Under this model of urban concentration the importance of the urban demographic is amplified, as compared to the decentralized, national urban formations of the past century where urban demographics were hidden beneath the quasi-egalitarian nature of urban population distributions.

Thus, the current state governor of Lagos, Babatunde Fashola, can proudly proclaim that a huge population is not only an asset but the single most important asset the city can have in the world economy. “It’s a big asset, bigger than the challenge the people represent by their sheer number. People are the biggest and most dependable resource” (Fashola, quoted in Rice, 2012). Already, what is possibly the largest city in Africa,\(^\text{72}\) is building for an even larger population with Mr Fashola planning for a city of 40 million inhabitants in the future (Rice, 2012).

\(^\text{72}\) While estimates of the population of Lagos, especially the total demographic population in the continuous built environment, are problematic, the latest UN estimate in 2011 of 11.2 million inhabitants would indicate that the city is now larger than Cairo although the total metropolitan populations of both cities is estimated to be just under 18 million inhabitants each.
It is here we have returned full circle to Mike Davis’ question about ‘urbanization without growth’. “‘Modernization’, ‘Development’ and, now, the unfettered ‘Market’ have had their day. The labour-power of a billion people has been expelled from the world system, and who can imagine any plausible scenario, under neo-liberal auspices, that would reintegrate them as productive workers or mass consumers?” (Davis; 2004, pp. 27).

The massive new urban agglomerations, whether the gleaming towers of the Global North or the teeming slums of the Global South, have NOT been expelled from the new, reorganizing, world economy, they have been specifically and dramatically dragged into it. The true world economy of the twenty-first century is urbanization *AS GROWTH*. The investment and redevelopment of new urban spaces on scales and spaces deemed unimaginable to the decentralized metropli of the U.S. regime of accumulation or even the great imperial metropolis of nineteenth century London itself, is part and parcel of a new, extensive, world economy of cosmopolitan urban formations which are redefining regional space in an enlarged global competition for capital accumulation.

Thus, the new growth strategy is not the absolute number of urban spaces, the logic of heterarchy under U.S. accumulation, but in the absolute number of urban residents; the great ‘dependable resource’, ever more subjected to the requirements and economizing logic of capital accumulation in a new, supra-national, competition for profits and investment opportunities.

Thus, as the New York Times noted in describing China’s explicit plan to further urbanize another 250 million rural residents in the coming decades; “…a transformative
event that could set off a new wave of growth or saddle the country with problems for
generations to come… the number of brand-new Chinese city dwellers will approach the
total urban population of the United States – in a country already bursting with
megacities” (New York Times, 2013). From Li Keqiang, China’s new prime minister, to
Babatunde Fashola of Lagos, and Bruce Katz and the New Economy pundits of the U.S.,
urbanization itself is the top priority.

However, this is not fraught without severe problems, as the ability to secure the profits
and investment opportunities necessary to achieve the dynamics of growth and scale
required for an urban agglomeration are caught in contradiction from above and below.
The massive redistribution of urban space achieved by the U.S., Europe and parts of Asia,
in the beginning of the twentieth century, by the explicit intervention and organization
under the nation state, seems unlikely to be repeated in the twenty-first century. Both the
limitations of debt, real or perceived, and the current political strategy of neoliberal
entrenchment, seem trapped in its own contradiction of devaluation and continuous
spatial, suburban, expansion such that all measures to return back to the core cities appear
self-defeating.

The cities of the Global South fair little better. Whether the attempt to raze the shadow
cities of Istanbul or India or wrest control of them in Brazil, the limited and truncated
nation state of the new century faces a contradiction between local needs and global
competitive struggles; either one of which would be difficult to address and together
create the image of a state in crisis. Movement towards the needs of the local engender a
crisis of profitability and the discipline of the global market, while a move to facilitate
and subsidize the opportunities for global investment and profit are met with increasing social movements and protests from below.

The need and ability to sell the urban, in a global market, has become ever more acute with escalating costs to procure a particular image. Beijing’s 2008 Olympics were to be the grand entrance of the China, as a possible leader in the world economy, onto the global stage, as were the much less successful 2010 Commonwealth Games for India. Even the London Olympics were, as Jeremy Hunt, minister in David Cameron’s cabinet said, “…the best possible gift you could ask for because it has given London a profile on the global stage” (quoted in New York Times, 2012). Some would find this strangely odd that London needed to spend an estimated $15 to $20 Billion on a sporting event to be recognized as an important city in the world economy but London is far removed from its days at the heights of the urban distribution.

The need to ‘sell’ an image and space of particular urban centers, to facilitate and subsidize the pursuit of development and accumulation in the new, extensive, world economy is the same economizing logic which subjugated the political organization of urban space to the logic of national capital in the twentieth century. But now it is the subjugation of states, as much as cities, to the agglomerating needs of economic growth while maintaining the political separation between and within large scale urban metropoles.

However, the concentration of urban space also facilitates opportunities for new social movements, as the agglomeration of economic activities is also the agglomeration of demographics. One need only witness the situations of the Blackberry Riots in London in
2011, in one of the most securitized cities in the world, or the recent Gezi Park protests in Istanbul in 2013. Here, protests from below have explicitly challenged the image of prominence on the global stage, as in London, or challenged the pursuit of greater opportunities for capital accumulation and investment in Istanbul. The pursuit of the global undermines the conditions of the local, just as investment in the local, siphons opportunities from the global.

Part of this may simply emerge from demographic concentration but part may also be emerging from the return of the small enterprise sector and the subcontractor economy. The new economic strategy of subcontracting in the twenty-first century, rather than the direct vertically oriented production of the twentieth century, may create the opportunities and necessity for new forms of social organization and protest that are not directed at a specific capitalist organization. If the process of urban agglomeration itself offers greater opportunities and returns for the advanced economy by utilizing the small scale and informal production centers of the clustered urban economy, then the strategy of social unrest cannot target single entities to achieve substantive concessions for labor and redistribution.

Finally, we are left with the possibilities for urbanization in the twenty-first century. One possibility is the emergence of a new hierarchically organized city distribution centered on a new urbanized region in the world economy, Asia. Investment and research firms have long proclaimed the future wealth and opportunity emerging in the region, especially China and India. With as much as 60 percent of the current world’s population, the opportunity for a new concentrated urban formation to emerge is quite strong.
The McKinsey Global Institute (MGI) clearly claims this is the future of global growth. Arguing that 60 percent of world GDP is derived from the 600 largest urban centers in the world, 35 percent from the 100 largest, over the next few years this group will contribute more than half of the total world economic growth. Further, the cities of Asia, specifically China, will emerge to dominate the world economy and the urban distribution.

“MGI finds that population in the City 600 will grow an estimated 1.6 times faster than the population of the world as a whole. By 2025, the City 600 will be home to an estimated 310 million more people of working age – and account for almost 35 percent of the expansion of the potential global workforce. Almost all of this increase is likely to be in the cities of emerging markets – and two-thirds in the leading cities of China and India…

Globally, the three cities that will experience the strongest growth in housing demand will be Beijing, Shanghai, and Tokyo” (“Urban World: Mapping the Economic Power of Cities”, Report, March 2011).

This is further supported (or lamented) by certain urban pundits in comparison to the U.S. Some, such as Joel Kotkin, now look at the urban formations occurring in Asia and elsewhere in the developing world and see the decline of the west. Just as Americans once wailed about the deficiency of the U.S. city, in comparison to the great parks of
London, some scholars now see a “poverty of ambition”. The vision of urbanization and development has been lost in the global race to create a new urban image for the twenty-first century city.

“Attitudes have consequences. The rising stars of the non-Western world – from the United Arab Emirate to Singapore and China – are building cities with startling new architecture and bold infrastructure….The difference in ambition can be seen clearly at airports, where now serve as the entry halls of the global economy. A traveler to John F. Kennedy Airport, Heathrow, Charles De Gualle, LAX, or Dulles passes through decayed remnants of fading late 20th century buildings and technology. In contrast, airports in Dubai, Hong Kong and Singapore offer clean, ultra-modern facilities with often impressive design” (Kotkin, 2010b).

If this proves accurate, a new urban hierarchy will have clearly emerged centered around a new spatial scale of urban concentration in Asia. The new urban forms will be both the demographic and economic pillars of the new global distribution, replete with the twenty-first century version of the Empire State Building or Regent’s Park.

But despite the rosy reports by MGI and others, the urban growth of the Asian economies is not without its own set of urban crises. Among the most prominent is the crisis of debt currently consuming much attention. In the rush to create ‘global cities’ and compete in
regional and global competition have taken on greater and greater amounts of debt, none
more spectacularly than some of the Chinese cities.

Today, headlines are filled with questions about the level of local debt of Chinese cities
and the threat this poses to the ongoing expansion of the global economy. Fitch Ratings
Ltd, recently claimed that China’s total credit may have reached 198 percent of GDP at
the end of 2012 with an estimated $2.1 trillion held in local debt alone (quoted in
Bloomberg News, April 9, 2013). While The Financial Times ran an article claiming
Chinese local debt is ‘out of control’ and poses a larger risk to the world economy than
the U.S. housing market crash (Financial Times, April 16, 2013).

Whether the current debt crisis of many cities is an indication of economic instability and
stagnation or a more minor correction in the ongoing reorganization of capital in the new
century remains unclear. The local debt crisis of Asian, specifically Chinese, cities is
reminiscent of the recurring local debt crises of U.S. cities throughout the close of the
nineteenth and beginning of the twentieth century. Although that crisis resulted in a
massive expansion of capital and investment throughout the U.S. city-system, it was only
finally resolved by the intervention of the U.S. and the establishment of the Keynesian
welfare state. Whereas, the current crisis has no true political overarching governance
system that seems capable of performing the same institutional role; the nation state
appears too limited a political and geographic entity to achieve a new round of
stabilization, demographically or financially.

The second crisis of the new Asian cities is one of overproduction, where far more new
urban space has been created than there demand for, driven by the boosterisms of a
speculative bubble. If urbanization in the twenty-first century is moving towards large scale, generalist, cities of massive agglomeration, the success of small and medium urban spaces is limited. For some, this is the true urban crisis of China and elsewhere.

“The big, cosmopolitan cities of Beijing and Shanghai have grown dramatically, but the bulk of the urban migration has been to cookie-cutter small and medium-size industrial towns that have mushroomed over the last decade…

This process of urban growth, however, is about to unravel…The boom in the successful cities, therefore, will hollow out human capital from less attractive industrial hubs, which will then fall into a vicious cycle of decay and falling productivity” (Sanyal, 2013).

However, the issue is again left in doubt. Although, I would agree that many of the new urban spaces in Asia and elsewhere around the world will ultimately fail, hollowed out as a few dominant urban spaces emerge from the current global contest for supremacy or even relevance\textsuperscript{73}, I have shown how a similar process of urban culling occurred in the United States in the nineteenth century. Then, just as now, new cities and towns were developed almost overnight with no clear economic or social organization underlying their development other than the belief and boosterisms of those who were selling the land and infrastructure. Does this mean that the Asian, Chinese, model of urban

\textsuperscript{73} Although some of these cities may truly fail, what I really mean is that they will fail to grow to the ambitions and speculations of the urban entrepreneurs who have speculated and boosted their growth on the hopes of becoming the next New York, Shanghai, or Tokyo. They will fail in relative terms as opposed to absolute terms.
development has been hopelessly flawed and about to implode? Possibly, but that is certainly not what happened in the United States despite hundreds or even thousands of ‘ghost towns’ emerging throughout the waning decades of the nineteenth century.

Finally, is the possibility of the re-emergence of the city-state and the return to a ‘pre-modern’ form of global urban formation. If the political organization of the urban form is now no longer contained within the nation states, then the possibility exists that cities alone may truly emerge as global competitors to one another in the world economy. A return to the Italian city-states of Venice or Genoa which operate between or above the political organizations of states and regions.

The city of Dubai, what Mike Davis has called the “new global icon of imagineered urbanism” (Davis, 2006; pp. 50), has explicitly followed this strategy by offering itself up as a generalist city, freed from much of the political controls or requirements of the state. Here, companies and ex-pats from around the world can build and profit from the new global economy under regulatory conditions which are distinct from the rest of the United Arab Emirates. The city is a haven for capital where the social and political constraints of the state need not apply.

Others such as Singapore are truly independent states unto themselves while even the return of Hong Kong to China has been only partial, as it retains many of the features of a city-state, separated from the rest of China and the full demands of the Chinese state. Perhaps the new urban formation is the true crisis of the nation state and the full manifestation of a world economy where independent or quasi-independent cities will compete in an global urban division of labor, the global slums of production and the
world cities of consumption. In either case, the decentralized strategy of urbanization is likely ended and the return of the imperial metropolis is well underway.
Appendix I: Estimating Urban Populations and Database

The accuracy of estimating the total number of residents for an urban area remains highly questionable and problematic. Many historians, archaeologists, sociologists, and even economists have tried various means of estimating populations by using standard multipliers and complex formulas for making inferences from historical records. Even differences in the physical size of a settlement, amount of area devoted to housing, the number of stories per house, or even the issue of what constitutes the extent of an urban area remain highly debated issues. These questions continue today with modern cities. Does the city of Los Angeles, which has no defensive wall to surround the original city, stop at an invisible jurisdictional city or county line? Or does the city represent the area of continuous built-up settlement that stretches along the coast of Southern California into Mexico?

Cities are the living creations of people and societies and these cities are in a constant state of flux as people move into and out of the city. Historical fluctuations of a city population would have occurred on a daily basis as merchants, farmers, and many others moved through the city. Major population changes would have occurred between seasons, during times of war or plague, or other significant events of the time.

The physical sizes of settlements are expressed as acres, hectares, square meters, square feet, and many other measures depending upon the region and culture of the estimators. Table 1 is a conversion table for some of the more common ways settlement size is estimated.
The original data used by our Urbanization and Empire Formation Project were from *Four Thousand Years of Urban Growth* by Tertius Chandler (1987). Chandler tried to systematically estimate the city populations of all major cities in urban history. His endeavor encountered many problems and suffered from limited information from text sources as well as incomplete archaeological data. While certainly the most complete effort of its time, there have been many criticisms of some of his estimates. Chandler’s definition of a city is “the urban area including suburbs lying outside the municipal area,” but he specifically claims that there were no suburbs outside city walls and that there was no large suburb growth until 1850 CE (Chandler 6). This obviously causes immediate problems since the presence of suburbs has been well documented in history with new walls built to enclose a population that had spread beyond the original walls.

Tertius Chandler's (1987) compendium contains population estimates for the largest cities on Earth since the beginnings of urbanization in Mesopotamia. Chandler's data set is a valuable resource based on decades of research at the library of the University of California at Berkeley. For our purposes, however, it needs to be upgraded using more recently published studies than Chandler used and extended to cover more frequent time points and better coverage of South Asian cities. The time points used by Chandler are

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**Area Measurement Unit Conversions**

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<th></th>
<th>Hectare</th>
<th>Acre</th>
<th>Square Meters</th>
<th>Square Feet</th>
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<tbody>
<tr>
<td>Hectare</td>
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<td>2.471</td>
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</tr>
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<td>Acre</td>
<td>.4047</td>
<td>1.00</td>
<td>4,047</td>
<td>43,560</td>
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</table>
too far apart before 1100 CE (e.g. 1200 BCE, 650 BCE, 430 BCE, 200 BCE, etc.). We propose to upgrade and extend Chandler's data set by:

- Extending the data set to include more South Asian cities and assembling data on East, Central and West Asian/Mediterranean cities for more frequent temporal estimates, and

- Adding new estimations based on recent studies that have come out since Chandler completed his published data set.

For this job of city size data enhancement and expansion we will improve upon the methods that Chandler employed (Chandler 1987: 2-13). Chandler used several methods for estimating the population sizes of cities -- census figures, traveler’s reports, size of the urban built up area, hearth counts, size of the residential area, the size of the military, etc. Chandler developed the art of the “multiplier,” a method for converting estimates of population density in urban areas into estimates of the total urban population. These methods have been advanced especially by anthropologists who have done cross-cultural studies of human settlements (e.g. Brown 1987). We will employ the more recently developed insights regarding the estimation of population densities and the use of multipliers to estimate total urban population sizes.

Measurement of the population sizes of cities is not without difficulties, especially for early periods. How can we know the number of people who reside in Los Angeles today? We use the most recent census, a survey of “residents” conducted by the U.S. federal government. What are the spatial boundaries of “Los Angeles”? Do we mean the city of Los Angeles, Los Angeles County, the contiguous built-up area that constitutes “greater
Los Angeles,” or a definition based on the proportion of the local population that is employed in “Los Angeles”? Does “Los Angeles” include San Diego? So where is Los Angeles? We want to use the contiguous built-up area as our main way of spatially defining cities. For early cities we do not have official, and ostensibly complete, census figures. Thus we rely on methods that archaeologists and students of early urbanization have developed to estimate the population sizes of cities.

These involve, for example, determining the spatial size of the city and then estimating the population density per unit of area and so estimating the total population. Population density varies depending upon the size of families, the nature of dwellings, the amount of non-residential area within settlements, and cultural differences. Anthropologists and archaeologists have made an important effort to produce reliable methods for estimating population sizes from residential areas (Brown 1987).

Tertius Chandler (1987) used reports about the number of soldiers to estimate city sizes, assuming that an army of men represents, on the average, about one-sixth (Chandler 8) of the population of the city in which the army resides. Such estimates are obviously error-prone.

Another problem with existing estimates of city sizes is that they were produced from surveys of both secondary and primary sources that are now, in many cases, obsolete because more recent and better research has been published by archaeologists, epigraphers and historians such as Kenoyer and Bahn. Chandler’s compendium was mainly based on his thorough survey of the contents of the main library at the University of California, Berkeley over the four decades prior to its publication in 1987.
Chandler also used proportions of city population in districts at other time points to estimate back. Examples are the estimated city populations of Kaifeng in 1642 and Hangchow in 1862 with their proportions in 1930. Chandler also used comparisons by travelers to other cities such as Alexandria to Cologne in 1500. His estimation of number of people per hectare has a range of 75 to 200 with a standard of 100 people per hectare. This average comes from what Chandler terms Fox’s Law. This states that, “the density ratio for an old wall should be substantially higher than for a new one” (Chandler 6). So the area of a new wall had an average of 75 persons per hectare while an older wall may have an average of 200 persons per hectare. Cities, such as Genoa and Edinburgh, could reach as high as 500 persons per hectare because mountains preventing expansion boxed them in. Therefore an average of 100 persons per hectare is reached between the varying densities of walled areas in older cities. Chandler also considers Chinese cities to have an exceptionally low density of 75 persons per hectare, “because of the Chinese refusal to sleep below anyone” (Chandler 7).

A major endeavor to improve upon Chandler’s data was undertaken by Paul Bairoch(19xx, 19xx). Bairoch considered three factors when estimating city populations.

1) The amount of ground within the city walls occupied by residential buildings versus non-residential buildings, gardens or grazing areas.

2) The amount of uninhabitable space within buildings or multiple stories

3) The density of occupations which, Bairoch states, may vary considerably.
Bairoch started with the Chandler and Fox data from *Three Thousand Years of Urban Growth* and revised and updated from more recent, or possibly overlooked, sources. He estimated increasing the European City data sets by 15% and the Latin American data sets by as much as 50%.

Bairoch reports that many scholars have used population densities of 400-700 people per hectare. He considers these estimates to be high. Bairoch’s population density estimates vary based on civilization and time period and he includes an estimate of the margin of error for each group (see below).

Bairoch's Urban Population Density Estimates

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<th>REGION</th>
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<tr>
<td>Cities of Islam</td>
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<td>20-25%</td>
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<tr>
<td>Cities of Europe</td>
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<tr>
<td>(Greek and Roman)</td>
<td>100-115</td>
<td>20%</td>
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<tr>
<td>(1300-1500)</td>
<td>100-115</td>
<td>10%</td>
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<td>(1550-1800)</td>
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Below the differences between Bairoch and Chandler’s estimates of city populations are compared. For Paris they are fairly similar but with four major differences at the 1300, 1500, 1600, and 1850 time points. In 1850 there is a difference of almost 300,000 people.
and the 1300 time point has a 34% difference in the estimates. At all four time points there is a difference of more than 15% between the populations. When comparing data sets for Rome there is only one time point, in 1500, that has a difference of more than 10% with only minor variations in estimates between the two for other time points.

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* Time points (at 1300, 1500, 1600 for Paris and 1500 for Rome) show differences of more than 10%.

Fekri A. Hassan, in *Demographic Archaeology* also uses a standard of 100 people per hectare when estimating most urban population centers. *(he provides no reasons for the use of 100 and cites no exceptions for the use of this measure)* Others have used similar methods to determine population sizes. Robert M. Adams (1965) used an average of 200 persons per hectare to estimate the populations of ancient Mesopotamian cities. He reached this figure by studying the modern cities in the area, specifically the old quarters of Baghdad (216 persons/ha) and many towns and villages on the Susiana Plain (223
persons/ha) and Kur Basin (137 persons/ha). Braidwood and Reed (1957), “took the size of the present population of the mound of Erbil to arrive at an estimate of 213 persons per acre (19 meters squared per person) of town area” (Hassan 66). Frankfort (1950) studied the sizes of houses in the Middle East to reach an estimate of 297-494 persons/ha and Colin Renfrew estimated the population of the Aegean in the Late Bronze Age at 300 persons/ha and 200 persons/ha for the Neolithic period.

Hassan summarizes a long effort by anthropologists to determine the population densities of villages and towns. These methods examine the area within built structures devoted to dwelling floor space and the average number of people per residential structure. Archaeologists can often count the number of hearths in a settlement, and so they know the number of households. The effort here is to estimate the average number of people in a household. These methods are quite relevant for estimating the population sizes of cities because the number of residential units can be determined from complete excavations, or estimated from partial excavations. And traveler’s reports often mention estimates of the number of households in cities.

One alternative method is to create a mathematical relationship between population size and the size of the urban area. Kramer (1978) has attempted to do both types of estimates. In her study of Southwest Asia she arrived at a constant estimate of 119.6 + 54 persons/ha. It should be noted that she considers degrees of nucleation of settlements for the differences in estimates. Kramer also determined a mathematical relationship of $P=146.15A^{.51}$ where $P=$population and $A=$the site area in hectares. According to Hassan the correlation coefficient is .62 for settlements.
Norbeck (1971) and Naroll (1962) both created their own relationships for estimating population sizes. Norbeck uses allometric growth, a pattern of growth where “the area required as individuals are added to the population is not constant” (Hassan 69). His formula is \( A = aP^{(2/3)} \) where he compares an urban area to a volcano. In this model the population density is low at the edge or rural areas, increases rapidly in a suburban area into the city, and decreases again near the center of the city where residences are not common. *(Hassan does not consider this method very useful because it is for urban areas and not for hunting and gathering groups and so does not go into much detail)*

Naroll studied data from 18 different societies to estimate the prehistoric population of sites. His formula \( A = 21.7P^{(0.84195)} \) was then simplified to \( P = (A/10 \text{meters squared}) \) where each person required 10 square meters of habitable space. This method of estimating populations was attacked by LeBlanc in 1971 where he showed that the standard deviation of floor space within family areas was quite large, “undermining the reliability of determining population size from floor area” (Hassan 73).

A comparison of difference was computed for cities in antiquity using the different assumptions about urban population density made by Chandler (100/hectare, Bairoch (Table 2), and Hassan (100/hectare). The estimates of city populations produced by different assumptions about population density includes the estimations for the areal sizes of cities of the Indus Civilization based on recent archeological evidence by Jonathan Kenoyer (1998). Other estimates of city sizes came from Chandler, Bairoch, or Paul Bahn (1999). The specific population estimates derived by each were used where information was available. While Bairoch’s estimations are consistently higher than those done using
Chandler’s and Hassan’s method, his systematic evaluation of urban populations using recent data would make his estimations more reliable.

Estimates of City Populations Produced by Different Assumptions About Population Density

<table>
<thead>
<tr>
<th>Decade</th>
<th>City Name</th>
<th>Size (in hectares)</th>
<th>Estimated Population</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chandler</td>
<td>Bairoch</td>
<td>Hassan</td>
</tr>
<tr>
<td>3300BCE</td>
<td>Uruk</td>
<td>200 (Bahn)</td>
<td>20000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2800BCE</td>
<td>Uruk</td>
<td>550 (Bahn)</td>
<td>55000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2100BCE</td>
<td>Rakhigarhi</td>
<td>80 (K)</td>
<td>8000</td>
<td>12000</td>
<td>8000*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Harappa</td>
<td>150 (K)</td>
<td>15000</td>
<td>22500</td>
<td>15000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mohenjo-Daro</td>
<td>250 (K)</td>
<td>20000*</td>
<td>37500</td>
<td>25000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ganweriwala</td>
<td>80 (K)</td>
<td>8000</td>
<td>12000</td>
<td>8000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dholavira</td>
<td>100 (K)</td>
<td>10000</td>
<td>15000</td>
<td>10000</td>
<td></td>
</tr>
<tr>
<td>1600BCE</td>
<td>Avaris</td>
<td>1000 (C)</td>
<td>100000</td>
<td>150000</td>
<td>100000</td>
<td></td>
</tr>
<tr>
<td>1200BCE</td>
<td>Tyre</td>
<td>~70 (Ba)</td>
<td>7000</td>
<td>30000*</td>
<td>7000</td>
<td></td>
</tr>
<tr>
<td>1360BCE</td>
<td>Chengchow</td>
<td>320 (C)</td>
<td>32000</td>
<td>48000</td>
<td>32000</td>
<td></td>
</tr>
<tr>
<td>1360BCE</td>
<td>Erech</td>
<td>450 (C)</td>
<td>50000*</td>
<td>67500</td>
<td>45000</td>
<td></td>
</tr>
</tbody>
</table>

*These estimates were already calculated and published. The other numbers have been calculated using the different assumptions of the authors and the areal sizes listed. Sources: Bahn (1999), K= Kenoyer(1998), C= Chandler(1987), Ba=Bairoch(1988).

I upgrade the city data sets by improving upon Bairoch’s approach to estimating urban population densities using the methods developed by anthropologists for estimating household sizes. We will use the most recent and complete information available to upgrade and expand the accuracy and temporal resolution of city size estimations. With this new and expanded dataset we hope to provide a better understanding of the evolution of complex societies and the processes by which regional interaction networks expanded to become the single global political economy of today.
To create a Measurement Error Model for estimating the population of cities requires multiple indicators to compute available estimates that are common to all urban areas. Using these various factors will allow us to create a working model that includes variable estimates that are unique for each city and specific standard estimates that remain constant in the model.

The variable indicators include:

- Area of the City within the Wall
- Built-up Urban Area of the Whole City
- Total Residential Area
- Total Number of Residential Hearths in the Urban Area
- Total Number of Houses in the Urban Area
- Total Non-Residential Area
- Total Number of Families

Area of the City within the Wall:

This is one of the most common estimates to be found on cities throughout history. Cities throughout the Afroeurasian Region have commonly used walls to surround and protect the city and its inhabitants from invasions and environmental disasters with many cities having concentric rings of walls built over time. It is also one of the easiest and most distinctive remnants of a city that can be identified by archaeologists.
The Built-up Urban Area of the Whole City:

This is a much harder estimate to account for since this includes the urban area outside the walls of the city. This area is usually a poorer or industrial section of the city where the inhabitants of the city either cannot afford to live within the current city walls or are not wanted within the walls due to pollution or noise.

Total Residential Area

This includes only the residential buildings in the urban area and the total space they take up. This does not include the roads or other un-utilized living space around the residential housing such as open squares or water wells.

Total Number of Residential Hearths in the Urban Area

This is another common estimate that can be found in archaeological work done on cities based on the distinctive residue a domestic hearth leaves behind in soil. This can also be sometimes found in historical records taken for census or tax purposes as in the case of the 1691 Hearth Tax in Edinburgh.

Total Number of Houses in the Urban Area

The number of houses in the urban area makes up the total residential area and is usually found as estimates in historical documents or is calculated by archaeologists and demographers from the number of domestic hearths in the city.

Total Non-Residential Area
The Non-Residential Area includes all religious and military buildings that make up the city as well as the total area that is taken up by roads, sewers, baths, and other space not specifically used for residential space including vacant spaces.

Total Number of Families

The number of families in a city provides a counter estimate to the total number of homes in an urban area and was commonly used in early censuses done in cities.

The specific indicators are calculated to be the averages within an urban area and include:

- Average Number of People per Dwelling
- Average Number of Families per Dwelling
- Average Number of People per Family
- Average Size of Dwellings
- Percentage of Residential Area to Total Area
- Average Population Density of the Whole City
- Average Population Density of the Residential Area

Average Number of People per Dwelling


Average Number of Families per Dwelling
This average is estimated to be 1.4 families per house in urban areas from Alston (2002). This is supported by the 1.5 families per house when averaging the 1.96 families per dwelling from the 1801 census of London and the 1.07 families per dwelling for 1638 by Finlay (1981).

Average Number of People per Family

The number is represented in a range from 3.9 to 4.1 people per family. An average of 4.1 people per family was reached from the 4.09 per family found in North London from the 1801 census. When multiplied by the 1.4 families per dwelling this reaches 5.74 people per house. The other end of the range is estimated by dividing the 5.5 people per house estimate by the 1.4 families per house to achieve an average of 3.9 people per family. While the range of variation appears very small, any change in the estimate affects the overall population estimate. In a comparison of the model of London for 1800, the estimate of 3.9 per family became an average total population estimate in the model while using the 4.1 became the high total population estimate. See Table 1. Using the 3.9 per family constant creates only a four-percent variance in population estimates while using 4.1 for the constant creates a seven-percent variance in population estimates for the model.

Number of People per Family (London 1800 comparison)

<table>
<thead>
<tr>
<th>London 1800</th>
<th>Total Population Estimate</th>
<th>Range of Total Population Estimate (all variables)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.9 per family</td>
<td>967,645</td>
<td>948,150 – 974,732</td>
</tr>
</tbody>
</table>
4.1 per family | 1,017,267 | 948,150 – 1,017,267

(1) Average Size of Dwellings

The Average Size of Dwellings is computed by two measures. First the average total floor area of the dwelling and then divided by the average number of stories per dwelling.

The average total floor area was estimated using the standard dwelling sizes of several cities, calculated by Alston in Table 2, to compute an average dwelling size for all cities of 214 meters squared per house. The average number of stories per house is estimated at two from Alston (2002) and Hobson (1985).

This then creates an average of 107 meters squared, 214 meters squared of total floor area divided by an average of two stories, when calculating the total residential area in an urban area from the number of houses in the urban area.


<table>
<thead>
<tr>
<th>City Name</th>
<th>Avg. Floor Area</th>
<th>City Name</th>
<th>Avg. Floor Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priene</td>
<td>207m2</td>
<td>Abdera</td>
<td>161m2</td>
</tr>
<tr>
<td>Kassope</td>
<td>210m2</td>
<td>Dur Eruopus</td>
<td>256m2</td>
</tr>
<tr>
<td>Karanis</td>
<td>75.2m2</td>
<td>Olynthus</td>
<td>289m2</td>
</tr>
<tr>
<td>Pompeii</td>
<td>271m2</td>
<td>Herculaneum</td>
<td>241m2</td>
</tr>
</tbody>
</table>
Percentage of Residential Area to Total Area

This estimate has been derived using the estimates generated from London in 1650, 1681, and 1700 where the total residential area consistently accounted for 49 percent of the total urban area. This matches estimates by others including Bagnall (1993) who used an estimate of 50 percent residential when looking at Hermopolis.

Average Population Density of the Whole City

This is one of the most common estimates used to estimate city sizes and has varied greatly depending on who is doing the research. The estimate reached for the model was computed by taking the average density from several population estimates to the total urban area of London in Table 2 to reach an average of 214 per hectare and rounded up to 250 for the model.

Average Density per London Hectare

<table>
<thead>
<tr>
<th>Decade</th>
<th>London Area**</th>
<th>Chandler Est.*</th>
<th>Bairoch Est.*</th>
<th>Brett-James Est.*</th>
<th>Galley Est.*</th>
<th>Avg. per Hectare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1600</td>
<td>1166</td>
<td>187</td>
<td>200</td>
<td>250</td>
<td>200</td>
<td>214.41</td>
</tr>
<tr>
<td>1650</td>
<td>1713</td>
<td>410</td>
<td></td>
<td>350</td>
<td></td>
<td>204.32</td>
</tr>
<tr>
<td>1700</td>
<td>2333</td>
<td>550</td>
<td>575</td>
<td>527</td>
<td>575</td>
<td>225.89</td>
</tr>
</tbody>
</table>

* Population estimates in thousands
** London area in hectares

Average Population Density of the Residential Area
An average of 500 persons per hectare for the residential area is estimated. This was calculated from the results of the 1801 census and the 1639 census of London, which found an average of 490.41 and 498.461 people per hectare within the walled area respectively. This also matches the total of doubling the average per hectare for the total area (Since the total residential area accounts for 49 percent of the total area).

This then creates a total of 14 individual factors for our measurement error model to use when estimating the population of a city. Seven of the factors are fixed estimates that remain constant in the model and are used in conjunction with the other seven variable estimates that are unique for the specific city being used in the model. The model then is divided into four groups while allowing variables to cross between the groups to fill in for any missing information. The use of four groups of variables allows for a range of four estimates to be calculated and therefore not rely on a set estimate for the population.
By combing all of the factors into one we create a measurement error model of the following:
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EDUCATION
Ph.D., The Johns Hopkins University, Baltimore, MD – Department of Sociology
Anticipated date of degree: October 2013

M.A., The Johns Hopkins University, Baltimore, MD – Department of Sociology, 2011

B.S., University of California, Riverside, Riverside, CA – Sociology, 2004

Basic Non-Commissioned Officers Co-urse (BNCOC), 640th Regiment Regional Training
Institute (RTI), United States Army, Camp Williams, UT, 2003

Primary Leadership Development Course (PLDC), Henry H. Lind Non-Commissioned
Officers (NCO) Academy, United States Army, Fort Lewis, WA, 1999

PH.D. DISSERTATION
The City in Time and Space: Urbanization and the World Economy, Advisor: Beverly Silver, PhD
This dissertation analyzes the world’s largest cities from 1400 to 2010, using a database of historical estimates of urban population that was compiled and developed by the author. Using this database, I identify a recurrent reorganization of global urban space moving between a hierarchical and heterarchical distribution of cities. Moreover, I show how this pendulum swing between hierarchy and heterarchy is highly correlated with recurrent crises of capital accumulation and associated shifts in the geographical center of power in the capitalist world economy. Finally, through a comparative-historical analysis of key cities over the past six centuries, this study develops a causal analysis of the relationship between systemic cycles of accumulation, urban (re)development, and crises of capital.

By placing cities into a macro-historical perspective, this study shows how contemporary urban crises are embedded in the dynamics of capital accumulation over the longue durée. The comparative-historical analysis presented in this study helps demonstrate why much of the current literature on urbanization is unable to reconcile the role and history of ‘primate’ cities in the world economy of the twentieth century and the emergence of new urban spaces in the twenty-first century. By challenging the narrative of national urban development in the twentieth century, it becomes clear that the ongoing urban transformation of the twenty-first century is not unprecedented (as it is commonly argued in the literature on urbanization), but is part of a recurrent cyclical reorganization and
secular expansion of capital accumulation. Finally, the *longue durée* analysis presented here leads us to expect a transition away from the national cities of the twentieth century and towards an urban form that in many ways shares a closer commonality, politically, to the city states of fifteenth century Italy and, demographically, to the imperial cities of the nineteenth century.

**AWARDS AND GRANTS:**
Excellence in Teaching Award, Krieger School of Arts and Sciences, The Johns Hopkins University. 2013.

Doris Roberts Entwisle Teaching Fellowship, The Johns Hopkins University, 2013.


$30,000 grant to develop a new undergraduate major facilitating participation in ongoing research programs with the Arrighi Center for Global Studies focused on a wide range of critical questions surrounding contemporary processes of globalization

Graduate Scholar Award for the 2012 International Conference on Interdisciplinary Social Sciences.

Runner-up for Excellence in Teaching Award, Krieger School of Arts and Sciences, The Johns Hopkins University. 2012.

Finalist for Excellence in Teaching Award, Krieger School of Arts and Sciences, The Johns Hopkins University. 2009.


$7,000 fellowship and 20% tuition coverage to develop and teach a course at Johns Hopkins University which offered a perspective not currently covered by the regular teaching curriculum.


$5,000 grant for the development of a relational database of information in a GIS format to facilitate lectures and assignments in understanding the changing historical conditions of the world.

**TEACHING EXPERIENCE**
Department of Sociology, The Johns Hopkins University:

Instructor
Course developed and funded by the Doris Roberts Entwisle Teaching Fellowship. Examines the intended and unintended consequences of urban planning in the American city using a comparative-historical framework.

“Global Urbanism: Planet of Slums or World Cities”, Spring 2012. Undergraduate Seminar Course.
This course addressed the relationship between development and the political and economic structure of the world economy in the built environment of the city.

Required course for undergraduate Sociology majors. Introduction to classical and contemporary sociological theories and understanding the theoretical constructs and their application to analyses of current social issues.

“Comparative and Historical Research Practicum”, Fall 2011. Upper Division Undergraduate Course (Co-taught with Professor Beverly Silver)
Course which focuses on “hands on” research experience in comparative historical research methods examining stratification in the world economy and global social movements.

“Social Statistics”, Fall 2010, Fall 2012, and Fall 2013. Graduate Course.
Required course for all incoming Sociology graduate students covering quantitative statistical methods using parametric and nonparametric measures of analysis with STATA.

“Social Statistics”, Fall 2010, Fall 2012, and Fall 2013. Undergraduate Upper Division Course.
Required course for all undergraduate Social Science majors covering quantitative statistical methods using parametric and nonparametric measures of analysis with SPSS/STATA.

Course offered under the Discover Hopkins Program for prospective and incoming college students to experience the academic environment. Course employs both a seminar format, as well as Service Learning to facilitate learning outside the classroom environment itself.

Course offered with the B’More Program for freshman undergraduate courses focusing on issues in Baltimore to introduce students to the city through discussion and Service Learning.
Course developed and funded by the Dean’s Teaching Fellowship in the Krieger School of Arts and Sciences examining the urbanization and urban development globally through comparative historical analysis.

**Department of Sociology, The Johns Hopkins University:**  
**Teaching Assistant**

“Social Statistics”, Fall 2006-2007 and 2009 with Professor Katrina McDonald.  
“Medical Sociology”, Spring 2007-2008 with Professor Katherine Smith  
“Medical Sociology”, Spring 2006 with Professor William Eaton and Professor Katherine Smith  
“Introduction to Sociology”, Fall 2005 with Professor Beverly Silver and Professor Pamela Bennett

**Department of Health, Behavior, and Society, The Johns Hopkins Bloomberg School of Public Health:**  
**Teaching Assistant**

“Social and Behavioral Aspects of Public Health”, Summer 2007 with Professor Katherine Smith

**RESEARCH EXPERIENCE**

**The Johns Hopkins University, Arrighi Center for Global Studies**

**The Johns Hopkins University, Department of Sociology**
Research Assistant for Professor Giovanni Arrighi, 2006-2007  
Collected and analyzed statistics and materials on the political and economic conditions of the world economy for Professor Arrighi’s book *Adam Smith in Beijing*, 2007.

Research Assistant for Professor Joel Andreas, 2004-2005  
Conducted a literature review and background investigation for Professor Andreas’ book *Rise of the Red Engineers*, 2009.

**University of California, Riverside, Institute for Research on World Systems (IROWS)**
Project Researcher for Professor Christopher Chase-Dunn, 2001-2006  
Developed, collected and analyzed statistics and materials on a variety of historical and contemporary themes, especially the development of a comprehensive database of urban populations and empire sizes. Projects included: Urbanization, Empire Formation, and Global State Formation; Globalization Research; Global Elite Formation Integration in the Nineteenth and Twentieth Century.

**University of California, Riverside, Department of Sociology**
Research Assistant for Professor Steven Brint, 2002-2003  
Collected and analyzed data for the Colleges and Universities Project 2000.

TEACHING AND RESEARCH INTERESTS
Historical and Contemporary Urbanization  
Political-Economy and Global Development  
Comparative Historical Sociology  
Quantitative Methods  
Medical Sociology

PUBLICATIONS
Daniel Pasciuti. 2013. “Reexamining Zipf’s Law from a World Historical  
Perspective: Urbanization, Complexity, and the Rank-Size Rule” in International  
Journal of Interdisciplinary Social Sciences. (in press)

“The Developmentalist Illusion Redux?” with Beverly Silver (article)  
Accepted for publication in Overcoming Global Inequalities, Immanuel  
Wallerstein, Christopher Chase-Dunn, and Christian Slater (eds.) Paradigm  
Publishers (forthcoming)

Christopher Chase-Dunn, Daniel Pasciuti, Alexis Alvarez, and Thomas D. Hall. 2006.  
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Urbanization and Empire Formation in World-Systems” in C. Chase-Dunn and  
E.N. Anderson (eds.), The Historical Evolution of World-Systems. New York:  
Palgrave. pp. 92-112.

BOOK REVIEWS:

“Review of Marina Peterson and Gary W. Donogh (eds.), Global Downtowns”.  
University of Pennsylvania, 2012 in Planning Perspectives. (forthcoming)

Comparative Sociology. (forthcoming)
UNDER REVIEW:
“Naples: Nexus of Imperial Power and Cosmopolitan Wealth” (article)
Under review at the Journal of Urban History


WORKS IN PROGRESS:
Lectures in Statistics with Katrina McDonald (textbook)
Currently developing an introductory statistics textbook which better facilitates the learning and structure of quantitative analysis for the social sciences.

“The Great Ivory Hope: From the New Economy to the Next Economy and the Infinite Loop of Urban Redevelopment”
Paper which critiques the current urban development strategy in the Baltimore-Washington Corridor to similar development projects and agendas from the past several decades.

CONFERENCE PRESENTATIONS:


“Global City Networks in World Historical Perspective” with Christopher Chase-Dunn, Alexis Alvarez, Andrew Jorgenson, Richard Niemeyer, and John Weeks, American Sociological Association Annual Meeting, 2006


“The Ancient Mesopotamian and Egyptian World Systems” with Christopher Chase-Dunn and Alexis Alvarez, All UC Multicampus Research Unit in World History Conference, 2003

ADDITIONAL PROFESSIONAL ACTIVITIES

PROFESSIONAL AFFILIATIONS AND MEMBERSHIPS
American Sociological Association (ASA)  
International Studies Association (ISA)  
American Urban History Association (UHA)  
Social Science History Association (SSHA)