GOVERNMENTALITY, THE GRID, AND THE
BEGINNINGS OF A CRITICAL SPATIAL
HISTORY OF THE GEO-CODED WORLD

A Thesis in
Geography
by
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ABSTRACT

In many cities and towns throughout the world today, the numbering of houses has become such a commonplace practice of local government that its everydayness makes it hard for urban inhabitants to even imagine living without these inscriptions that make up the abstract spaces of everyday life. Yet, as a spatial practice, house numbering is a comparatively recent phenomenon, which did not become widespread until the second half of the eighteenth century. So taken-for-granted has the house number become that few geographers have examined the history of house numbering from a critical perspective. This is particularly surprising given the recent interest in understanding the intersecting “axes” of knowledge, power, and the production of space. Drawing upon extensive archival research, this study brings together the theoretical insights of governmentality studies and Marxian geography to explore the history of house numbering in U.S. cities and towns in general while also providing a case study of the spatial politics of street and house numbering in New York City.

I argue that the ordering of space was a key strategy to contain the dialectical processes of capitalist urbanization within the fixed order of logic and number. The project of numbering houses was often first proposed not by municipal officials but by the publishers of city directories to facilitate conducting a privately-financed door-to-door “census.” I argue that the house number and city directory were two of the most important “technologies” of spatial individualization in nineteenth-century urban America, and that one of the principal goals of rationalizing space was, in fact, the economization of time. I further suggest that examining the construction of such a “spatial regime of inscriptions” should be central to a critical spatial history of the “geo-coded world.” The purpose of such an analysis is not to reduce politics to the technical. Just the opposite, it is to provide the analytical tools necessary for illustrating that the technical itself has a politics, which opens the possibility of viewing the realm of the technical as a potential site of democratic struggle and contestation instead of a restricted domain of depoliticization.
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PREFACE

This study is not an apologia for the grid, the geo-coded world, or the numbering of the landscape. Both my master’s thesis as well as the current study aim to provide a critical analysis of the spatial politics of rationalizing the landscape, and the dissertation seeks to correct the various interpretive deficiencies of the master’s thesis. In particular, when rereading my master’s thesis, I notice a distinct adherence to a hermeneutical approach of trying to get “inside the heads” of the designers of the Manhattan grid plan (as well as the grid’s early critics) as if their original intentions were the definitive word on the “original meaning” of the grid. This was clearly an interpretive mistake, yet I still believe that it had some fruitful consequences for interrupting the broken record of narratives concerning the New York grid by excavating some interesting discourses that had not previously been considered. This almost Weberian hermeneutic exercise was mostly present in Chapters 4 and 5 of that study. If one reads Chapter 4 alone, for example, one might be tempted to think that I am “defending” the grid plan and its Cartesian aesthetics. However, if one continues on to read Chapters 5, 6, and 7 of the master’s thesis, then I think it will become quite clear that an apologia for Cartesian aesthetics was certainly not what I had in mind at all, as I hoped that my sarcastic “Tribute to Descartes” at the end would illustrate.

1 It goes without saying that the various factual blunders present in my master’s thesis will have to be reconsidered if I plan to eventually publish such material in journal article or book format. For instance, witness my naïveté concerning Clement C. Moore’s slyness in taking credit for “his” Christmas tale as well as my conflation of linear perspective with surveying (since it is quite clear that Simeon DeWitt’s book, The Elements of Perspective, is a treatise on linear perspective rather than surveying as I mistakenly note in the thesis). I have also moved away from the lingering positivism in my reference to Robert Boyle’s semantics of “nature” and Max Weber’s fact/value distinction that was a throwback to my days in the Environmental Sciences at UVA. Hopefully I have not let similar mistakes sneak into the present study.
An outgrowth of my master’s thesis, the current dissertation project is a historical study of the geography of “sequential ordering” more broadly, yet the series of events that resulted in its production were anything but linear and calculable. In fact, the seemingly logical structure and argumentation of this study—as a final product—may conceal the contradictions of its very production. I am speaking of more than just the usual anxieties of graduate school or those stemming from the catastrophe that is the “present moment” in world history. I am also referring to the contradictions entailed in trying to construct a “legible” interpretation and critique of the very practice of attempting to impose a legible order upon a contradictory urban “reality.”

These contradictions reached the breaking point one morning in the winter of 2004 at JFK airport in New York. I had packed my back-pack full of photocopies that I had made of city directory prefaces, all in alphabetical order by city name and date, which I planned to read over the winter break before writing Chapter 4 of this study. I was rushing to the gate to catch an early flight to Virginia when, all of a sudden, the zipper on my back-pack came undone and the photocopies flew out and scattered all across the floor behind me. At that moment, America’s urban history seemed to be nothing more than a tattered collection of dusty pages scattered on the ground of the concrete present.

Fortunately, I still made the flight but it took me at least an hour or so to rearrange all the papers back into their “logical” order. As I was sitting there—bitterly amused—I pondered the irony of the situation. How paradoxical, I thought, that I am sitting here sequentially arranging the chaos of these mixed-up papers when it is
precisely this practice of constructing an alphanumerical order out of what one city directory publisher called the “chaos of names” that I was going to be critiquing in Chapter 4. That I had to engage in the very practice that I wanted to critique—precisely in order to critique it—was a paradox that I still have not been able to fully resolve.

Despite all of the rhetorical acrobatics that I perform to give this study the appearance of a coherent order—and indeed such appearances even convince me most of the time—I am still left with a sense that I feel most comfortable thinking via historical fragments or a Benjaminian “montage” rather than constructing a logical narrative. That is perhaps why I have structured this study thematically rather than chronologically (although there is still a chronological component to the structure of several chapters). I have no logical explanation or justification for my preference to think in fragments other than that it seems to me that all that remains of the past are in fact fragments. We can attempt to construct elaborate causal connections among the fragmentary “evidence” provided by historical traces—as I myself attempt to do in the chapters that follow—yet there remains a strange unease that this is merely yet another attempt to impose a legible and calculable order upon the complexities of both the past and present. Here again is a contradiction that this study opens—like Pandora’s box—yet has a hard time resolving satisfactorily (if such a resolution is even possible or desirable).

Given the perils of sequential ordering just mentioned, it is still worth attempting to describe in a quasi-sequential narrative style the way in which I stumbled into this project despite my own preconceptions. The project was originally
going to expand upon my master’s thesis, which examines the debate over the original Manhattan grid plan of 1811, and my dissertation was to further explore the implementation of the grid plan. During my first year in the Ph.D program, I came across David Scobey’s recently published book, *Empire City: The Making and Meaning of the New York City Landscape* (2002), at a bookstore in Manhattan. After reading it, I felt that he had done a very good job of analyzing Manhattan’s real estate economy and had covered a lot of ground concerning the politics of implementing the grid plan. There were omissions, of course, such as a lack of discussion about the rise of the Streets Department in municipal government, which I thought might provide me with ample room for a dissertation topic.² Yet, reading Scobey’s book led me to reevaluate whether or not I still wanted to merely “extend” upon my master’s thesis, or to shift my focus altogether instead.

One of the things I found most curious about Scobey’s study was its heavy reliance on the Marxian geographical tradition and complete silence concerning Foucault’s theorizations of spatiality and power. Scobey’s Marxian account of the production of space and class politics, impressive as it was, seemed to be lacking a fundamental consideration of the relations between knowledge and power, the central concern of many Foucauldian approaches. While writing my master’s thesis, I had engaged the Foucault of *Discipline and Punish* to theorize the disciplinary characteristics of the grid, and subsequently I had begun to delve into the literature on governmentality studies.

Skipping ahead a bit, during the summer of 2003, I found myself in Columbia University’s Avery Library digging through their card catalogs hoping that I might

² For my published review of Scobey’s *Empire City*, see Rose-Redwood (2004).
find something of interest related to New York’s streets. It was here that I came across Solomon Goodman’s *Bibliography on the Subject of House Numbering, Street Numbering, Street Names, and Street Name Signs* (1954), which sparked my interest in the history of street and house numbering. I had always found myself telling people that what interested me most about Manhattan’s grid was not simply its geometry but the fact that it was a “materialized” Cartesian coordinate system with its numerical sequence of perpendicular streets and avenues (this had interested me even more after reading Bruno Latour’s discussion of inscription devices in *Pandora’s Hope* [1999]). Finding Goodman’s *Bibliography*, then, reminded me why I had chosen to study the Manhattan grid in the first place. I then began to search for the various articles that Goodman cites in his bibliography and became more fascinated with the subject as I read more.

It was right around this same time that I began reading Patrick Joyce’s book, *The Rule of Freedom: Liberalism and the Modern City* (2003), which my advisor had recommended several months beforehand. In it, Joyce briefly mentions the importance of house numbers and city directories in British urban history as part of his much larger analysis of the rise of urban governmentality. Yet, I felt that Joyce really only scratched the surface of what I took to be a subject in need of a more detailed historical investigation. I honestly cannot recall which came first—discovering Goodman’s *Bibliography* or reading Joyce’s *The Rule of Freedom*—but either way, over time I became more and more convinced that the history of street and house numbering was a subject of considerable significance despite its apparent banality. The key question was where I could find any further secondary literature on
the topic. I sent out a query to the H-URBAN email listserv asking precisely this question and received a number of helpful responses. It turned out, however, that very little scholarly work on the subject actually existed, at least in English. I found this itself to be a revealing finding that demonstrated, I felt, that “numbering the landscape” was a spatial practice that had become so incorporated into the taken-for-granted world of everyday life that few scholars saw the need to critically analyze it.

Upon returning to Penn State for my second year in the doctoral program, I became much more conscious of the spatial numbering that I found surrounding me, it seemed, on all sides—even in central Pennsylvania, miles away from Manhattan’s methodically numbered streets. At the time, I lived at 614 S. Pugh Street—better known as the “Pugh Palace”—which acquired its street address from the fact that it is six blocks south of the house numbering baseline of College Avenue, one of State College’s main thoroughfares. Walking along Pugh Street and Beaver Avenue, I also began to notice that the room numbers had been painted onto the balconies of the various student apartment complexes downtown near the university (Figure 0.1). I later learned that this was the result of an ordinance for which the local police had lobbied in order to more easily identify at the street-level which rooms were causing a “disturbance.” This was part of a broader strategy of “anti-riot” control that included the installation of high-tech surveillance cameras on Beaver Avenue after a number of so-called “riots” in the late-1990s (Koons, 2000a; 2000b).

Likewise, within the classrooms on campus, I became more conscious of the grids of numerical inscription in which students were expected to obediently take a
Figure 0.1: The numbering of apartment balconies as an “anti-riot” measure in State College, PA (photo taken by author, 2003)

seat (Figure 0.2). On one level, this seemed harmless yet as I started writing Chapter 3, I began to sense how this was, in fact, a key strategy in the construction of disciplinary spaces and the internalization of Cartesian subjectivities. Chapter 3 is, I think, one of the more important chapters in this study (at least in theoretical terms) since it was while writing this chapter that I developed the theoretical framework and vocabulary that I utilize throughout this study (“spatial regime of inscriptions,” “materialized epistemic spaces,” etc.). Of all the chapters, this was actually one of the hardest to write. I must have started and stopped writing Chapter 3 at least half a
dozen times before finally deciding upon the structure and content that appears in this final draft.

If any chapter requires further research, however, it is without question Chapter 7, especially my discussion of the street name changes in Harlem during the 1980s. As I explain in the Introduction, to truly do justice to this topic would require conducting interviews with the various people involved in the process of commemoration, which was beyond the scope of this study. I also hoped to have found more archival records to document the debate over renaming upper Fifth Avenue as Marcus Garvey Boulevard, but since it did not pass into law, I had difficulty finding the relevant public hearing minutes for the case (if such exist). This is perhaps a result, at least in part, of the fact that I am somewhat of an “outsider” to
the New York City scholarly community and had to learn by trial-and-error how to conduct archival research in the Empire City.

This preface—similar to the hundreds of city directory prefaces that I read to complete this project, i.e., all those still scattered on the floor of Kennedy Airport in my imagination—is, in a way, an attempt to “authorize” the text that follows in both senses of the term. I have sketched out (albeit briefly and selectively) the personal trajectory of my own thought processes as “author,” perhaps subconsciously as a means to legitimate, and hence “authorize,” the course of action that I took by somehow imposing a coherent order upon the contradictions of the author’s life-path. Yet, the authority of the writer is always on the verge of doubt and reversal, always itself subject to contradiction and counter-argument. The act of writing and authorizing the final product is, above all else, a creative “performance” that despite all its nuances still remains a product of the traces of the past (with contradictions and all). When comparing my dissertation to my master’s thesis, I cannot help but notice that the soberness of Apollo appears to have triumphed over the poetics of Dionysus—at least temporarily!—yet perhaps that is the price one must pay to be initiated into the ranks of the Academy. And yet if Edward Said (1985 [1975]: 24) is correct in his insistence that “[t]o begin to write . . . is to work a set of instruments, to invent a field of play for them, to enable performance,” then perhaps this study is a work of art after all.

Reuben Skye Rose-Redwood
Somewhere on Long Island
December 2005
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An impossible task: to acknowledge each and every person that made this project possible. First, I would like to thank my advisor, James McCarthy, for being supportive of this project from start to finish. He read through each of the chapters multiple times and always gave constructive feedback whenever it was needed. I also want to thank him for encouraging me to expand my dissertation beyond its preliminary focus on New York City and to consider the larger theoretical significance that the project might have for contemporary debates in human geography. Of course, the influence of an advisor goes far beyond mere editorial advice on the final product itself; the dissertation, after all, is only “submitted in partial fulfillment” of the requirements for the doctoral degree. Equally important has been James’ guidance in expanding my own theoretical horizon by taking seminars and independent studies with him as part of my graduate training. His advice on submitting journal articles, organizing conference sessions, and applying for jobs has also been particularly helpful.

My other committee members—Melissa Wright, Daniel Purdy, and Jeremy Packer—also provided very useful suggestions for improving the quality of my work, especially as I consider reformatting my dissertation into a book-length project, hopefully in the near future. Melissa challenged me to seriously consider the role that the politics of gender played in the history of house numbering and city directory publishing in the United States. Although time has not permitted me to fully address her comments in the present study (yet see portions of Chapter 4), I plan to do so in future journal articles that come out of this dissertation. I also thoroughly enjoyed
taking Melissa’s urban social policy course the first year of my doctoral studies as well as the political economy seminar that she co-taught with James when I was still a master’s student here at Penn State.

It was Daniel Purdy who introduced me to the work of the Frankfurt School theorists of Adorno, Horkheimer, and Benjamin. While this study does not extensively engage with their scholarship in an explicit manner, a definite connection can be drawn between the current study and Horkheimer and Adorno’s *Dialectic of Enlightenment* as well as Benjamin’s various writings, including *The Arcades Project*. As I was in the final stages of completing this study, I was reading much more of Benjamin’s work and recall reading Susan Buck-Morss’ *The Dialectics of Seeing* on the subway traveling back and forth between Manhattan and the Bronx.

While taking Daniel’s seminar on Architectural Aesthetics, as well as an independent study, I was especially impressed by Benjamin’s critique of modern historiography and the idea of progress. As a master’s student, I had taken an independent study with James on the critique of the Enlightenment idea of progress, so reading Benjamin’s fragmentary poetics of history with Daniel was quite refreshing, especially when juxtaposed to the arrogance of much positivist historical thought. Interestingly, Benjamin himself makes a passing reference to the emergence of house numbering yet does not explore the subject in any detail.³ Daniel has encouraged me to explore the history of house numbering from a Benjaminian standpoint. While the current study is certainly no *Arcades Project* or *One-Way Street*, I hope to expand my own creative imaginings once the restrictive limitations

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³ I am indebted to David Henkin’s *City Reading* (1998) for this reference to Benjamin and house numbering.
of securing a doctoral degree are finally themselves “history”!!!(Yes, James, I have purposely included the exclamation marks!).

Jeremy Packer was kind enough to join the committee rather late in the game, after my former committee member, geographer David O’Sullivan, had left for New Zealand. Jeremy’s interest in Foucauldian governmentality studies and the history of transportation in the U.S. made him an obvious choice for a committee member on this project. I really enjoyed jointly giving a talk with him on “Foucault and Governmentality” as part of the Wireless Communications Workshop at the University of Michigan in August, 2004. I particularly remember the comical scene five minutes before our talk: standing out on the roof of the building, Jeremy places a cup of coffee on his notes to hold the papers down. A rush of wind comes upon us and the coffee spills over while several of the pages of paper fly into the air and off the roof down to the ground below. The talk still went fine anyhow, yet the image of Foucauldian theory flying chaotically off the roof remains more vivid in my memory than the actual talk itself! I appreciate Jeremy’s thoughtful comments during my defense and hope that I have addressed the relevant issues in the finished product.

While David O’Sullivan left for NZ in the middle of this project, he was very supportive of my research interests throughout the process. He is one of the few quantitative geographers that I have met who actually takes seriously the critiques of quantification as a political project. I enjoyed our many conversations about everything from “Manhattan space” and interpolation methods to the utter absurdities of U.S. foreign policy in the current age of empire. I would also like to thank the Chair of the Department of Geography, Roger Downs, for his general support of my
research and graduate experience as well as his editorial feedback on my dissertation itself. Thanks are also owed to the librarians at Penn State University, Columbia University, the New York Public Library, the New-York Historical Society, the Municipal Archives, and the team at the Manhattan Borough President’s Topographical Office.

At the beginning stages of my doctoral studies, I contacted historian Eugene Moehring for advice on conducting archival research in New York. At that point, I was still planning on writing a history of the Manhattan grid plan, and Eugene was kind enough to read my master’s thesis and offer constructive feedback. One question in particular stood out among the rest: what exactly was it about the rectilinear geometry of the grid that had such disciplinary effects in comparison to other geometric patterns or organic urban form? That question stuck with me for quite some time, and in some ways this dissertation is my response. I eventually concluded that it was not necessarily the geometry of the grid itself but the construction of a coordinated system of spatial inscriptions that was key to understanding the relations of knowledge, power, and the production of abstract space. This went a long way in explaining how the curvilinear suburb could still be considered a part of the “grid” of abstract space despite the apparent dualism between the straight line and the curve. So, thanks Eugene for probing me on the discipline of the grid early in the game.

I also appreciate the comraderie of colleagues whom I have met via the AAG, including Margo Huxley, Matt Hannah, Clive Barnett, Pablo Mendez, etc. Thanks for the “critical encounters” and good times! I also owe much to the work of geographer John Pickles in developing my own interests in the “geo-coded world.” I enjoyed our
conversations in Happy Valley in ’05 and thanks for taking an interest in my work. Additionally, Derek Alderman and Maoz Azaryahu have both been an inspiration for my own ideas on the cultural politics of commemorative street naming. Thanks for the free beer and conversation in Denver! I would also like to acknowledge graduate students Amanda Shoaf and Kori Olson from the Penn State French Department, as well as my step-sister Jessica Miller, for helping me translate portions of Jeanne Pronteu’s *Les Numérotages des Maisons de Paris*, which has unfortunately not yet been translated into English.

Similarly, I have really enjoyed the many conversations with colleagues and friends in New York City. Rebecca Shanor, thanks for all the wonderful picnic dinners at Columbia, where I believe I drank a bit too much red wine at the alter of Philosophy. I hope you publish that New York masterpiece one of these days! Rand, I really appreciate you taking an interest in my work and your Revolutionary humor! Lemuel Morrison, I had a lot of fun trekking through Central Park in search of Randel’s old monuments. Keep me posted on finding any more monuments in Central Park or Marcus Garvey, eh? Carl Riobo, I enjoyed the lunch conversations about New York history and the Upper West Side. Slawomir Lotysz, best of luck with your pneumatic railways! Joel Grossman, it was great discussing Manhattan’s historical topography and all the rest over good food and drinks. Jack Eichenbaum, I had a blast on your walking tour of the grid. Yet, should we all seriously “conform” to the grid? Or, should we rather follow tour-guide Timothy “Speed” Levitch’s advice to just “blow up the grid plan”? Speed, the walking tour of Central Park was grand and it was great to philosophize for a few hours after the cruise (or is the cruise never

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technically over?). I will do my best to combat the anti-cruise vibrations both in academia and beyond!

On a more personal note, I am especially grateful to my parents, Amber Rose and Daniel Redwood, who have served as a wonderful support system for me throughout the last twenty-some years. Mom, don’t take a wooden nickle, you hear? Dad, shall it be security or freedom (or is security a prerequisite of freedom?), that is the question! Additionally, my “fieldwork” in New York City would not have been possible without the generous love and support of my grandmother, Lillian Rosen, who provided me with a place to stay in Manhattan (once again, the living room couch was as comfortable as could be for a temporary bed, just as it had been when I was a master’s student). Grandma, you never cease to amaze me with your will to live. You’re a fighter, alright!

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1. INTRODUCTION

[T]he ubiquitousness of the grid has significantly transformed our sense of reality . . . . By the waning years of the twentieth century, it had become clear that the imposition of the grid upon all aspects of human existence was an inescapable fact.


The taken-for-granted is always that particular level of experience which presents itself as not in need of further analysis. Whether a level of experience is thus taken for granted depends on the pragmatic interest of the reflective glance which is directed upon it and thereby upon the particular Here and Now from which that glance is operating. To say that some content of consciousness is thus taken for granted still leaves it open as to whether any kind of existence or reality is credited to that content . . . . Nevertheless, a change of attention can transform something that is taken for granted into something problematical.


It’s a matter of shaking this false self-evidence, of demonstrating its precariousness, of making visible not its arbitrariness, but its complex interconnection with a multiplicity of historical processes, many of them of recent date.


I. Preliminary Considerations on the Grid and the Taken-for-Granted World of the Numbered Landscape

In a recent exhibit at the New Museum of Contemporary Art in New York entitled, *Living Inside the Grid*, curator Dan Cameron (2003: 12) contends that “the inhabited grid has become the irreducible sign of the world we live in today.” In everyday discourse and popular culture, the “grid” has become a catch-all phrase signifying the vast array of infrastructural and communication systems within which
socio-spatial relations are mediated and controlled in industrial and post-industrial societies.\(^5\) In recent years, the grid has served as a general signifier for the increasingly pervasive network of high-tech surveillance technologies (both public and private), and the culture industry has reinforced this popular conception in contradictory ways.

On the one hand, the “grid” of surveillance is depicted as an indispensable weapon in the “war on terror.” The television mini-series drama aptly titled \textit{The Grid} (which first aired on TNT during the summer of 2004) uses the notion of the “grid” to represent the counter-terrorism network of governmental surveillance and intelligence gathering in the post-9/11 era. But if the “grid” of surveillance is portrayed as an essential instrument of national security in this TNT mini-series, it is cast in a more dystopian light in Philip Kerr’s best-selling novel, \textit{The Grid} (1995). Set in downtown Los Angeles, the basic storyline of Kerr’s thriller is that a “smart building” equipped with the latest surveillance technologies, named the Gridiron, goes out of control just before its grand opening and starts killing people (including the building’s designers) that are trapped inside. In this case, the “grid” itself is the perpetrator of “terror” rather than a tool with which terrorism is combated. What both of the fictional examples above share, however, is a common vocabulary which equates the “grid” with the development of systems of surveillance, although their normative assessment of these systems diverges considerably.

\(^5\) Cameron’s definition of the “grid” is quite expansive, including everything from telecommunication networks to prisons to city street systems. “From morning commutes,” Cameron (2003: 12) argues, “. . . all the way to the last check of our e-mails at night, we involve ourselves in a limitless, overlapping network of grids, which act in obvious or hidden ways to order our movements, our work, our thoughts, our leisure time, and probably our dreams.” He goes even further, however, to conceptually merge all of these individual “grids” together into one overarching “grid,” a move which easily lends itself to criticism (see Rosenberg, 2003).
That popular conceptions of the “grid” associate it with the production of knowledge as an apparatus of power should come as no surprise to anyone familiar with recent critiques of the history of modern thought. The grid has traditionally referred to any rectilinear geometric formation based upon a principle of orthogonal order and repetition. In the context of the history of science, the grid is most often linked to the notion of a coordinate system (e.g., the Cartesian coordinate system). In fact, the Cartesian grid has served as one of the foundational principles of modern scientific reason in the latter’s quest for mastery over nature and the disciplining of body and mind (Akkerman, 1998).

Most coordinate grids consist of two central baselines that intersect at right angles, and each baseline (or axis) is numbered sequentially from the point of “origin,” thereby forming a grid of coordinates. With the exception of spherical coordinate systems, the coordinate grid is generally composed of two basic elements: rectilinear geometry and sequential numbering. The development of the coordinate system certainly pre-dates Descartes, yet it was he who made it one of the centerpieces of an epistemology devoted to the construction of “clear and distinct ideas.” The Cartesian epistemological framework had a profound impact on the subsequent development of scientific practice, the outgrowth of which includes (among other things) the proliferation of contemporary surveillance technologies.

It is worth stating at the outset that for the purposes of this study I shall distinguish between two related, yet distinct, meanings of the “grid”: (1) as a rectilinear geometric formation and (2) as a general signifier for the various systems

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6 It is well known that the cartographic coordinate system of latitude and longitude pre-dates Descartes’ use of the coordinate grid, see Berggren (2000).
of surveillance that have existed, both past and present. When I discuss the combined characteristics of rectilinear form and sequential numbering, I will use the term “coordinate grid” (or “Cartesian grid”). I do so to distinguish gridded space as such (without sequential numbering) from the coordinate grid (which unites the logic of orthogonality with coordinated sequential numbering). As alluded to above, the term “grid” is often used today as a general signifier of the multiple systems of surveillance and networks of power which currently proliferate. This use of the term, while overly broad and abstract, is taken by some to be useful as a shorthand device that conceptually consolidates the various infrastructural and communications networks into a cohesive totality. However, as is the case with Cameron’s conception of the “grid,” such a totalizing move risks overgeneralizing the unity and significance of the various grid-like formations that have structured modern life (Rosenberg, 2003). When speaking of the “grid” in this context, therefore, I will always place it within scare quotes in order to clearly differentiate it from the grid as a rectilinear pattern.

What is remarkable about the grid is not merely its centrality to modern scientific thought, nor its popular usage as a signifier of the totalizing network of surveillance. Rather, what is significant is the extent to which notions of the grid have permeated a plethora of discourses and practices—from modern art, graphic design,
and architecture to archaeology, urban planning, and geography. If a student wishes to pursue these various fields of academic study in any depth, he or she is likely to encounter the grid in some form or fashion—albeit from a particular disciplinary perspective. The grid is often singled out as the quintessential symbol of modernity—a metaphor for all things “modern.” For instance, in a celebrated essay entitled, “Grids,” art historian Rosalind Krauss (1985: 10-2) maintains that “the grid is an emblem of modernity” and insists that it is “so stridently modern to look at.” Such a claim rests on the circular logic of defining modernity as characterized by the grid and then proceeding to argue that the grid, therefore, is emblematic of the modern. Recognizing the self-referential circularity of Krauss’ argument, however, should not be taken as a refutation of such a view. To the contrary, such circularity can be self-reinforcing and has the potential to materialize itself as “reality.”

We should be cautious, however, not to insist too strongly on the strictly “modern” connotations of the grid. The grid pattern has been used as a mode of spatial ordering for centuries in many different cultural contexts, which complicates those metanarratives that see the grid as the essence of modernity. It is well known that ancient Chinese cities, such as Suzhou, as well as Roman towns and military camps, were laid out as grids long before the so-called “modern” era of European history (Kostof, 1991). While the grid is not unique to European modernity, the proliferation of gridded spaces and the unprecedented scale of such spatial projects, especially since the latter half of the eighteenth century, may go a long way in

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explaining why the grid has been perceived as characteristic of modern spatial organization. Marcuse (1987) and Grant (2001) have both attempted to construct heuristic typologies of the various historical usages of the grid in the context of urban planning. More importantly, Pope’s innovative study, *Ladders* (1996), draws on Krauss’ work to argue that the nineteenth-century centrifugal grid gave way during the mid-twentieth century to a centripetal form of urban design that privileges an enclosed gridded morphology, which Pope refers to as a “ladder.” What makes Pope’s work stand out from the rest—besides his creative mode of presentation—is his provocative analysis of the linkages between what he calls the “mid-century grid transformation” (Pope, 1996: 24) and the shifts in the politico-economic and cultural contexts within which such urban layouts were constructed.

More generally, many scholars have argued that the grid settlement pattern, so common in the Americas, facilitates the social control of populations by a centralized state authority (Stanislawski, 1946; Scott, 1998; Brown, 2001; Grant, 2001). Others have highlighted, from both a Marxian (Marcuse, 1987; Harvey, 1990; Lefebvre, 1991 [1974]; Scobey, 2002) and humanistic perspective (Mumford, 1961; Reps, 1965), the importance of the grid as a tool of real estate speculation and the commodification of space. Some scholars, such as Sennett (1990), even draw upon Weber’s “Protestant ethic” thesis to explain the grid in modern America. However, as architectural historian Spiro Kostof (1991) rightly argues, general statements that universally align the grid plan with a specific political ideology or economic practice (e.g., democracy, authoritarianism, capitalism, socialism) are bound to be reductionistic and misleading. The grid can just as easily serve the interests of
authoritarian dictatorships as it can liberal democracies, whether they be capitalist or socialist (Brown, 2001). To view the morphology of the grid as having an intrinsic ideological essence, therefore, is to fetishize spatial pattern and geometric form.

While the history of the grid pattern is important and deserves critical scrutiny (especially given its prevalence in the Americas), the present study is an attempt to shift the focus away from a theoretical fixation with the grid as urban form—that is, with the morphology of the grid per se. In doing so, I am by no means suggesting that the analysis of urban form is not a legitimate subject of critical scholarly inquiry. Yet, is it not possible that the never-ending debate over the origin, purpose, and desirability of gridded urban form has distracted urban theorists from examining what might very well be one of most important transformations of urban space in modern history: the emergence of house numbering as a mode of spatial ordering? Has the debate over the aesthetics of the grid had the effect of relegating the spatial practice of house numbering to the realm of the “taken-for-granted” and the “unproblematic”—thus, rendering a critical assessment of its historical emergence unnecessary, obvious, banal, and superfluous?10

The current literature on the grid is extensive, but the present study is based upon the premise that most accounts have largely failed to examine one key element that is absolutely central to understanding how the organization of gridded space is related to the intersecting axes of modern power relations and the production of

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10 I am purposely being provocative here in suggesting that house numbering is perhaps “one of the most important transformations of urban space in modern history,” because the current lack of interest in the subject indicates that this taken-for-granted spatial practice is not deemed “important” enough for serious historical analysis. We can, of course, debate precisely how important house numbering has been in relation to other transformations of urban space, yet the present study seeks to argue that the practice of house numbering is more significant—both historically and geographically—than is currently assumed by those who take the numbered landscape for granted as a self-evident and unproblematic aspect of everyday life.
spatial knowledges. As mentioned above, the Cartesian coordinate grid is composed of two principal elements—rectilinear geometry and sequential numbering. The vast majority of scholarship has sought to explain the significance of the grid as *rectilinear form* (which is often contrasted with “organic” layouts or other geometric patterns), yet equal attention has not been devoted to the related practice of sequential numbering. In the current study, I argue that the spatial practice of what I shall call “sequential landscape numbering” (that is, the consecutive numbering of streets, houses, buildings, etc.) played a pivotal role in attempts to construct spatial legibility and was central to the formation of modern administrative apparatuses of identification (i.e., the so-called “grid” of surveillance).

The chief aim of my dissertation is to critically examine how the sequential ordering of geographical space was directly linked to the formation of modern government and the development of capitalism. Using Foucault’s (1991a) discussion of governmental rationalities and the technologies of power as a starting point, I contend that the practice of house numbering, which first emerged as a general spatial practice during the eighteenth century, was fundamental to the rationalization of urban space and was a prerequisite for the biopolitical strategies of census-taking and governmental knowledge production. A comprehensive historical geography of the house number has yet to be written. Yet, if we are to understand what geographer John Pickles (2004) calls the “geo-coded world,” such historico-geographical research is essential given the fact that many contemporary geo-spatial technologies
presuppose the existence of an already geo-coded world of house numbers, zip codes, and the like (Raper et al., 1992; Monmonier, 2002; Curry et al., 2004). 11

Geographic Information System (GIS) technologies are becoming increasingly essential to contemporary public and private systems of surveillance (Pickles, 1995; Masser et al., 1996; Schuurman, 2000; 2004; Monmonier, 2002). Moreover, a recent president of the Urban and Regional Information Systems Association (URISA) has time and again emphasized “the importance of addresses” (Eichelberger, 1993; 2000b), arguing that address systems are “the locus of GIS,” because they help “to organize virtually all of local government’s administrative records” (Eichelberger, 1993: 212 and 221). Much of the existing literature on street address systems and house numbering is ahistorical and largely of a bureaucratic-technical nature (e.g., Corwin, 1978; Lucy, 1995). In other words, it consists of proposing idealized schemas and offering technical advice concerning the most efficient methods of geo-coding. What is lacking, by and large, is a critical historico-geographic analysis of the emergence of house numbering as one of the geographical foundations of modern government.

To be sure, several scholars have recently begun to reconsider street addressing and house numbering from a historical perspective (Thale, 1986; Garrioch, 1994; Henkin, 1998; Smail, 2000; Garrioch, 2002; Joyce, 2003; Curry et al., 2004). The classic work on the subject of house numbering in Paris is Jeanne Pronteau’s Les

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11 In the present study, I am primarily concerned with examining the history of street and house numbering in relation to the construction of such a “geo-coded world,” yet a more comprehensive account would also consider the history of postal codes as well. However, one distinction to keep in mind is that between those forms of spatial ordering that are literally inscribed into the geographic landscape itself and those which maintain their existence as “cartographic fictions” without a corresponding spatial inscription “on the ground.” This distinction, no doubt, will certainly blur in some cases, depending upon how exactly we define an inscription “on the ground.”
Numérotages des Maisons de Paris du XVᵉ Siècle a Nos Jours (1966), which has yet to be translated into English. Historian David Garrioch is one of the few to have brought Pronteau’s work to the attention of an English-speaking audience. Garrioch (2002: 238) argues that house numbering in Paris “was partly a reflection of an official desire to classify, to make urban space more uniform. But it was also a response to new ways of moving round the city.” Similarly, medieval historian Daniel Smail (2000) provides an insightful analysis of the practice of addressing in Marseille prior to the widespread adoption of house numbering during the eighteenth century. In his recent book, The Rule of Freedom: Liberalism and the Modern City (2003), historian Patrick Joyce also briefly considers the role that house numbering played in the “individuation” of the population in England during the nineteenth century. These studies provide a useful starting point for a spatial history of house numbering, yet much theoretical and comparative work remains to be done.

Few scholars, for instance, have considered the historical geography of house numbering in the United States. Thale (1986) examines the history of Milwaukee’s house numbering system, while Henkin (1998) offers a preliminary assessment of house numbering in nineteenth-century New York. Curry et al. (2004), on the other hand, take a more contemporary focus by critically examining the linkages between house numbering and the recent rise of emergency management systems. Yet, none of these studies provides a general examination of the spatial history of street and house numbering in the gridded cities and towns of the United States from the eighteenth century to the present.
The current study offers the beginnings of such a critical spatial history of street and house numbering in the United States. Sequential landscape numbering, of course, is not confined to gridded spaces. In fact, I argue that sequential landscape numbering is more important to the production of abstract space than is the rectilinear form of the grid itself. However, rectilinear geometry standardizes the practice of sequential numbering and provides an ordering schema that “coordinates” the individual numbers together into a spatialized “system.” Strict orthogonality, however, is not essential when it comes to the production of abstract geographical spaces. It is for this reason that the present study takes seriously the practice of sequential numbering as one of the key spatial practices in the history of abstract space.

Part of why I have chosen to direct my attention to the United States is because it is here that the logic of sequential numbering and rectilinear form converged on a scale unprecedented in human history. The coordinate grid provided a unifying framework for settlement on a continental scale while also serving as a model for the spatial organization of individual cities and towns. The U.S. Rectangular Survey System, devised in large part by Thomas Jefferson during the 1780s, divided much of the American landscape into a rectilinear grid of townships each with a unique pair of numerical coordinates within the Township/Range matrix (Pattison, 1964 [1957]; Johnson, 1976; White, 1983; 1996; Linklater, 2002). Likewise, the spatial layout of cities such as New York exemplifies the extent to which the Cartesian logic of numerical coordinates provided a symbolic order of “legibility” that seduced early city planners with its unparalleled simplicity (Rose-
Redwood, 2002). While not all U.S. cities are laid out as grids, the United States has acquired an international reputation as a country of gridiron cities in a checkerboard landscape.

What is significant about the gridded cities of the United States is not simply their rectilinear geometric form but rather the combination of the grid and sequential numbering as the basis of converting the geographic landscape into a *materialized epistemological framework*—in this case, a Cartesian coordinate grid. By “materialized” I mean the process whereby a coordinate grid is literally inscribed into a physical landscape. In analyzing the process of material inscription, I shall draw on, extend, and critique the recent work of science studies scholar Bruno Latour (1986; 1997 [1987]; 1999), which has in part inspired the current project as well as my previous work (Rose-Redwood, 2002). In contrast to scholars who draw a clear distinction between “science” and “ideology” (e.g., Scott, 1998), I will demonstrate that the uses of the Cartesian coordinate grid in scientific practice and urban governance are, in fact, epistemologically homologous.

The key question, then, is not so much, “Is the urban coordinate grid scientific or ideological?” but rather, “What is it exactly about the Cartesian grid that has made it so powerful in both formal scientific endeavors as well as in the spatial ordering and governance of everyday life?” Such abstract spaces of sequential order (whether gridded or not) have become the taken-for-granted “reality” within which everyday life is lived for many, especially in the gridded cities of the United States. A critical analysis of the politics of constructing spatial legibility, therefore, is of primary
importance if we are to understand the spatial history of the taken-for-granted world of the gridded and numbered landscape.

II. Geographical Imaginations of the Present and the Possibility of a Critical Spatial History

On a theoretical level, this study can be seen as an intervention or engagement with recent debates in the field of geography, as well as related disciplines, concerning the relations between knowledge, space, and power. The recognition that spatiality is just as significant as historicity, when it comes to understanding social phenomena, is becoming more widely embraced within both the social sciences and humanities (Soja, 1989; 1996; Mitchell, 2000). Elden (2001), however, argues that the recent focus on space should not detract from the importance of temporality (thereby merely inverting a crude historicism). As Elden (2001: 3) puts it, “we need to both historicize space and spatialize history.” Elden’s (2001) call for a “spatial history” that seriously considers the intersection of space and power (and does not skirt away from explicitly engaging with contemporary theoretical debates) is right on the mark, and the current study can be seen as such a critical spatial history of the sequentially ordered landscape.

Geographers, of course, have long been interested in examining the important role that “space” has played in human history (Livingstone, 1992). The subfield of historical geography, as its name suggests, has traditionally described and attempted to explain the shifting geographies of the past (Butlin, 1993). Historical geographers trained in the tradition of urban morphology have developed detailed techniques for
analyzing town plans while also documenting the morphological transformations that result from changing land uses and the spatial expansion of cities over time (Whitehand, 1987; Slater, 1990b; Vance, 1990; Whitehand and Larkham, 1992b). The work of M.R.G. Conzen, in particular, has had a major influence on urban morphological research in the English-speaking world. Conzen’s basic schema for analyzing the morphological characteristics of cities and towns consists of three plan units: town plan, building forms, and land use (Whitehand, 1981; Conzen, 1981 [1962]).

While recognizing that economic and political processes are driving forces in the construction of urban form, urban morphologists argue that too often the actual physical transformations of urban landscapes are neglected by theorists who place social processes more centrally in the limelight (Whitehand, 1981). Most work in urban morphology, however, has erred in the opposite direction as it has mainly been concerned with documenting physical transformations at the expense of considering larger theoretical questions regarding the social complexities of spatial practices. Urban morphology remains epistemologically committed to a form of positivism which attempts to claim the status of “science.” The aim, from this perspective, is to accurately describe or model the geometric form of historical settlement patterns using evidence such as historical maps, archaeological findings, and the like.

In contrast, cultural geographers have explored the symbolic meanings that humans ascribe to particular spaces (Cosgrove, 1984; Duncan, 1990; Adams et al., 2001; Anderson et al., 2003). Within the last two decades, cultural geography has been influenced by developments in cultural studies, semiology, and discourse
analysis. One of the central tenants of the so-called “new” cultural geography is to analyze landscapes as “texts” using the conceptual tools of semiology. The strength of this approach is that it seriously considers how landscapes can reinforce, or subvert, hegemonic cultural narratives. A good illustration of this method can be found in the work of James Duncan, who provides a fascinating semiotic analysis illustrating how royal cities in early nineteenth-century Sri Lanka were “explicitly built to represent the cosmos in miniaturized forms” (1990: 48-9).

In his book, *The City as Text: The Politics of Landscape Interpretation in the Kandyan Kingdom*, Duncan (1990: 17-19) argues that the cultural landscape should be seen as a “signifying system” and the larger aim of his analysis is to examine “the way landscapes signify relationships of power.” In both the *City as Text* and elsewhere (Duncan, 1980), Duncan criticizes the morphological tradition which has been the mainstay of U.S. cultural geography throughout much of the twentieth century. He acknowledges that previous cultural geographers engaged in the practice of “reading the landscape,” yet Duncan argues that such studies largely ignored the *politics* of the act of reading itself and have too often fetishized material artifacts without adequately theorizing the relationship between landscapes and power relations.

Although the “new” cultural geography has broadened the scope of understanding cultural landscapes, some Marxian geographers have critiqued both the morphological and semiotic traditions in geography. Mitchell (1996: 8), for instance, argues that “we simply cannot understand the form (or the meaning) of the landscape without attending closely to the relations of labor that were indispensable to its
making.” Marxian and post-Marxian geographers draw much of their inspiration from the work of Henri Lefebvre. The publication of the English translation of Lefebvre’s *The Production of Space* in 1991 dramatically shifted the terms of critical geographic discourse. In his now-classic text, Lefebvre outlines a framework for conceptualizing spatiality that consists of three basic concepts: spatial practices, representations of space, and spaces of representation (or representational spaces).

According to this schema, *spatial practice* refers to the socio-spatial processes that result in the construction of particular materialities (e.g., the construction of public spaces or physical infrastructure). In modern industrialized societies, Lefebvre (1991 [1974]: 38) argues, such practices are intimately linked to abstract *representations of space* as conceived by “scientists, planners, urbanists, technocratic subdividers and social engineers” (e.g., maps, urban plans, rationalistic calculation). Lefebvre contrasts the abstractness of such representations with the lived experience of the “inhabitants” or “users” of a space, which he calls the *spaces of representation*.

Throughout much of *The Production of Space*, Lefebvre critiques the production of abstract spaces (as well as their corresponding representations of space) and tends to privilege lived experience (and its related representational spaces). As I shall describe in more detail in Chapter 3, Lefebvre sees abstract space as an intrinsically *repressive* element of state power (whether in capitalist or socialist societies). Central to Lefebvre’s analysis is the insistence that space is not a pre-given, neutral container (as conceived by the technocrats and scientists). Rather, he maintains that space is socially produced through and through. This emphasis on “production” (and “labor” in Mitchell’s discussion above) is clearly drawn from
Marx’s claim that the “moment” of production is the chief site of exploitation in capitalist societies and, hence, the location for potential social struggle. What Lefebvre (2003) does is expand this Marxian argument beyond the confines of the factory by arguing that urban space itself is produced and should thus be a site of struggle.

Lefebvre’s (1971; 1991 [1958]; 1991 [1974]) work on the production of space and the critique of everyday life has had a major impact on contemporary debates in human geography, and I engage his work throughout this study. However, the work of Michel Foucault, even more so than that of Lefebvre, is extraordinarily attentive to detail when it comes to examining the power/knowledge axis of spatiality (I shall elaborate further on Foucault’s analysis of governmentality in the next chapter). Both Foucault and Lefebvre were instrumental to the “spatial turn” in social theory during the last quarter of the twentieth century, and a creative tension exists in contemporary theory between their analyses. They have both reshaped what Gregory (1994) calls the “geographical imaginations” of the present. In my own research, I have found Foucault’s analytics of power/knowledge more useful—that is, less reductionistic—than Lefebvre’s conception of power-as-repression. I also view Foucault’s work as more helpful in understanding the various ways in which the production of knowledge is intimately connected to the governance of populations through the ordering of space.

However, Lefebvre’s constant use of violent imagery in his discussion of the production of abstract space is a useful reminder of the repressive potential of state power and capitalist domination. It also reminds us that if urban space is indeed a
“text,” then as Walter Benjamin (1968: 256) once put it, we should remember that “[t]here is no document of civilization which is not at the same time a document of barbarism.” The interdisciplinary project of writing critical spatial histories of the present comes in the wake of both Lefebvre and Foucault, and the current study reflects this intermixture of theoretical influence.

III. Itinerary

Now that I have explained the general aim of this study and situated it within the context of contemporary geographical debates, this section provides an overview of the chapters that follow. I shall first provide a general discussion of the methodological quandaries that I have encountered while conducting this study. As noted above, one of the overarching questions that this project seeks to address is: what are the historical connections between the emergence of house numbering as a spatial practice and the development of urban government and modern capitalism? I have chosen to answer this question not with abstract generalities but through a detailed archival investigation of the specificities of urban house numbering in the United States in general as well as through a case study of street and house numbering in New York City.

Given the paucity of secondary literature on this subject, I had no other option but to delve into the primary source materials in the archives. One of the most crucial primary sources of evidence was the archived collection of city directories from cities and towns across the United States from the eighteenth and nineteenth centuries (these directories are widely available in microfilm format at many university libraries, including Penn State University, although I primarily used the copies
available in Columbia University’s Butler Library and the New York Public Library). As I will explain below, city directory publishers played a key role in the early history of urban house numbering in the U.S., which is why a critical analysis of the politics of producing the directories is absolutely central to this project. Other archival sources that I have utilized include newspaper articles, engineering and municipal government journal articles, historical maps, the meeting minutes of the West Side Association in New York City, correspondence letters from the House Numbering Archive at the Manhattan Borough President’s Topographical Office, and various government documents (e.g., Common Council minutes, public hearing minutes, local laws).

Drawing upon archival sources was generally sufficient given the historical focus of the current study. If time had allowed, it would have been useful to conduct qualitative interviews to further investigate the case of Harlem’s street name changes during the 1980s, which I discuss in Chapter 7 (see below). Admittedly, an entire dissertation could be written on the spatial politics of commemorative street naming in Harlem, yet such a detailed consideration is beyond the limited scope of the present study. Although I have only scratched the surface of analyzing the history of Harlem’s shift from “number to name,” hopefully this will be the subject of future research that explores this topic in the depth that it deserves.

Each chapter of this study poses its own questions and relies on different source material, yet they all relate in one fashion or another to a theoretical analysis of the politics of numbering the geographical landscape. I have situated my historical investigations within the context of current theoretical debates in geography,
especially with respect to the recent interest in Foucault’s concept of “governmentality.” The governmentality studies literature provided a starting point for this study yet did not offer all of the theoretical direction that I found necessary. In fact, I found the Marxian political economy literature just as helpful (if not more so). I have consciously chosen not to align my argument solely within one particular theoretical tradition and instead pragmatically appropriate what I view as useful from a number of theoretical approaches. This pragmatic eclecticism may appear problematic to theoretical purists, yet the aim of this study is not to provide empirical evidence to support a particular theory, but rather to utilize a variety of theoretical insights to better understand the historical linkages of knowledge, space, and power.

In Chapter 2, “Governmentality, Geography, and the Geo-Coded World,” I examine Foucault’s analysis of the emergence of governmental rationality, or “governmentality,” as well as the recent Foucauldian literature on the “analytics of government.” I then describe how the governmentality literature has been engaged by human geographers from the 1990s to the present. Foucault’s notion of governmentality serves as a useful theoretical starting point for this study, yet I also follow Milchman and Rosenberg’s (2002) call for a “critical encounter” between governmentality studies and Marxism, while also considering what the field of geography has to offer to this debate. I argue that in addition to examining the role of the census and mapping as technologies of government (two topics that scholars have already discussed in some depth), the contested construction of “legible landscapes” and the theorization of “spatial legibility” more generally both offer fertile ground for
further theorization of the geographic, or spatial, dimensions of governmental power/knowledge.

Chapter 3, “Spatial Legibility, Power, and the Formation of Materialized Epistemic Spaces,” begins by discussing various approaches to theorizing spatial legibility and the physical production of abstract, rationalized spaces. I provide an overview of different traditions that have considered the concept of spatial legibility—including Lynchian cognitive mapping, Lefebvrian urban theory, Foucauldian governmentality studies, and Latourian science studies. My own approach in the remaining portion of Chapter 3 generally follows a Foucauldian and Latourian line of inquiry concerning the construction of what I call “materialized epistemic spaces,” or “material replications” of epistemological frameworks, but I do not simply dismiss the various other approaches in the process.

Expanding on Latour’s notion of “inscription,” I theorize the formation of what might be called a “spatial regime of inscriptions.” I argue that both scientific practices and the “lived experience” of everyday life have been profoundly shaped by materialized Cartesian epistemic spaces and their associated administrative rationalities (which have in many ways been internalized by the “inhabitants” of abstract spaces). At the same time, I acknowledge the dialectical contradictions associated with attempts to impose a “fixed” order onto the chaotic flux of life (Lefebvre, 1991 [1974]; Harvey, 1996). In Chapters 4 and 5, we shall see how the advocates of spatial fixity in modern America contended with the dialectics of mobility and impermanence. Chapter 3, however, offers a theoretical framework that
provides the conceptual terminology for the more empirical/historical chapters that follow.

The aim of Chapter 4, “Index to the City-Text: The House Number and City Directory as Technologies of Government,” is to provide a critical analysis of how house numbering and the use of city directories were key spatial strategies of urban governmentality in eighteenth- and nineteenth-century America. If late twentieth-century cultural geographers viewed the “city as text,” so too did those advocating the practice of house numbering during the nineteenth and twentieth centuries. What mattered, from this latter perspective, was less the “narrative structure” of the “text” (so crucial to cultural geographers) but rather what we might call the “physical typography of the landscape” (that is, the basic arrangement and appearance of the “text”). The basic logic was: if the city is like a book, then house numbers are its “page numbers” that can serve as locational devices for the “contents” of such a text. The analogy with the book did not end there. If one wants to find a given name or subject in the body of a text, one looks it up in the book’s index to find the page numbers where such a name (or subject) is located. If only the city-text had its own “index,” so the reasoning went, then its page numbers (i.e., house numbers) could truly demonstrate their utility.

It is not a coincidence that during the nineteenth century the publishers of city directories (usually private entrepreneurs rather than state or city officials) often referred to their product as an “index” to the city. While usually including a miscellaneous collection of statistics and other information, all city directories consisted of an alphabetized list of residents (generally male heads of households)
along with their street addresses (or a description of a residence when house numbers were lacking). As Chapter 4 illustrates, city directory publishers in the United States were key proponents of numbering houses at a time when many local governments had yet to firmly commit to systematic house numbering as an essential responsibility of the local state. Chapter 4 begins by exploring the early history of house numbering and city directories as technologies of government and commerce. I then narrow the scope of my analysis by examining the role that city directory publishers played in the adoption of house numbering schemes in U.S. cities and towns during the eighteenth and nineteenth centuries.

Historical geographers, urban historians, and other scholars often make extensive use of city directories as a means to the end of studying some other historical phenomena. Yet, few have studied the production and circulation of city directories in their own right. In Chapter 4, I attempt to answer a number of questions: Who produced city directories and for what purposes? How was the information gathered and compiled? Was there any resistance to the collection of such information by local residents and how did the editors of city directories respond to these challenges? How was city directory-making interlinked with the history of house numbering? How did both house numbering and city directory publishing reflect the contradiction between the need for spatial fixity in a capitalist system that also depended on continuous change? Many of these questions can be answered through a critical reading of the prefaces of city directories themselves, as I shall demonstrate.
To engage in such an analysis, I read through the prefaces of hundreds of city directories (year by year), in the vast majority of U.S. cities and towns that published them, from their inception in Philadelphia in 1785 through to 1865. City directories continued to be published into the twentieth century, yet lack of time prevented me from systematically examining those beyond 1865. To make up for this lacuna, I pragmatically chose to read both the Philadelphia and New York City directory prefaces up until 1900 in order to get a sense of any changes that occurred in the directory business after 1865. However, I should make clear that my aim in Chapter 4 is not to write a comprehensive history of city directories nor of house numbering, for that matter. Rather, the goal is to argue that these spatial practices were key elements in the development of urban governmentality in the United States, which brought together state (that is, local city authorities) and non-state actors in the production of geographical knowledge through the construction of the “legible” cityscape as a sequentially-ordered “text.”

Chapter 5, “The Making of a Geo-Coded World: Street and House Numbering in Twentieth-Century America,” extends my analysis of the spatial practice of sequential landscape numbering in the United States through the twentieth century and into the present. It is not, however, simply a chronological account of the achievements of engineers and other technocrats. On the contrary, the objective of Chapter 5 is to examine the spatial history of street and house numbering in U.S. cities and towns (and to some extent rural areas as well) not in the spirit of positivist historiography but rather as a means of exploring the linkages between knowledge
and power as they relate to the production of the “rationalized” spaces of a geo-coded world.

If city directories were the discursive “sites” where a discourse on house numbering was first articulated during the eighteenth and nineteenth centuries, by the beginning of the twentieth century the discourse and practice of street and house numbering was well established as a responsibility of municipal government in many U.S. cities and towns. Consequently, engineers and city managers proposed and debated the merits of different numbering schemes, along with related topics such as street signage, in the pages of journals such as the Municipal Journal and Engineer, Public Works, Engineering News, and the American City. I was fortunate to discover Solomon Goodman’s Bibliography on the Subject of House Numbering, Street Numbering, Street Names, and Street Name Signs (1954) early enough in the research process of the current study to draw on it for primary source material on the topic of street and house numbering in twentieth-century America, at least up to 1954. Many of my sources for the first half of Chapter 5 are indebted to Goodman’s diligent bibliographic work.

In addition to examining the discourse on systematic street and house numbering, I also explore the emergence of a humanistic counter-discourse which vehemently opposed the use of numbers as street names yet was curiously silent concerning the practice of house numbering. The issue of opposition to street numbering is also taken up in Chapter 7, but in Chapter 5 I provide a general introduction to this counter-discourse and how pro-numbering advocates responded to such resistance. I conclude the chapter by examining how the recent rise of GIS
technology at the end of the twentieth century has renewed interest in the “importance of addresses” (Eichelberger, 2000b) among geo-spatial analysts working for both government and the private sector.

Chapters 4 and 5 offer an overview of the construction of the geo-coded world in the United States from the eighteenth century to the present. Chapters 6 and 7 then provide a more in-depth case study of how these processes unfolded in New York City, and Manhattan in particular. In Chapter 6, “Inscription, Contradiction, and the Spatial Politics of Numbering the New York City Landscape,” I explore the history of street and house numbering in the Empire City. This is a subject that few New York historians have deemed important enough to examine. Yet, as this study argues, the practice of street and house numbering was absolutely fundamental to the rationalization of urban space in the post-Enlightenment era. Therefore, I describe the early history of house numbering in Manhattan and how the imposition of the grid in 1811 provided a mechanism for standardizing the city’s house numbering scheme while also incorporating it within the coordinate grid of numbered streets and avenues.

I then trace the history of house numbering in Manhattan into the twentieth century and analyze the administrative rationality that it enabled. To do so, I utilize city records (such as the minutes of the Common Council), relevant newspaper articles from the time, as well as the meager secondary literature that exists on the subject (Hoffmann, 1937; Isaacs, 1940; Henkin, 1998). In addition, I also draw on the archives of the Manhattan Borough President’s Topographical Office, which is currently in charge of designating official house numbers in the borough. During the
summer of 2004, I visited the Topographical Office and took digital photographs of hundreds of documents related to house numbering that were collecting dust in their administrative archive. These documents serve as indispensable primary source material when trying to reconstruct the history of house numbering in Manhattan.

Chapter 7, “From Number to Name: Real Estate Dreams and the Politics of Collective Memory in the Cartesian City,” examines the reappropriation of the city’s symbolic landscape through the renaming of previously numbered streets and avenues. In particular, I compare and contrast the politics of changing the numbered avenue names on the Upper West Side in the 1880s-90s with the renaming of Harlem’s streets to commemorate civil rights leaders one hundred years later. The former was a scheme by wealthy property owners (via the West Side Association) to encourage real estate development while the latter was concerned principally with cultural/identity politics and “the right to the city,” as Lefebvre (1996) puts it. The benefit of examining both of these renaming projects together is that it provides a useful corrective to universalizing and romanticizing the “symbolic reappropriation” of the landscape by illustrating the divergent interests involved in such reappropriations.

Chapter 7 builds on the work of cultural geographers such as Alderman (1996; 2000) and Azaryahu (1996; 1997), who have analyzed the construction of “commemorative landscapes.” One of the main goals of Chapter 7 is to examine how identity politics is played out in the renaming of streets through the negotiation of public memory and recognition. The concluding chapter (Chapter 8, “Conclusion: Towards a Critical Spatial History of the Geo-Coded World”) summarizes the basic
arguments of the dissertation, discusses the larger significance of my findings, and suggests potential lines of future inquiry. Whereas Chapters 1, 2, and 3 provide the theoretical background for this study, the remaining chapters (with the exception of the conclusion) delve more deeply into the archives to substantiate, or complicate, the usefulness of the theoretical framework proposed.

If there is one unifying approach to this study, it is the combined method of analyzing the politics of governmentalized knowledge production while also examining its linkages to the specificities of constructing spatial regimes of inscriptions. In doing so, I draw most heavily upon the work of Foucault and Latour to develop my own theory of the materialization of epistemic spaces (see Chapter 3), but I also follow Lefebvre’s insistence to consider the political economy of knowledge production and the ordering of space. The overarching goal of this study is to begin the project of writing a critical spatial history of the geo-coded world. I think that the word “critical” is crucial here, because the notion of “spatial history” alone does not necessarily convey the methodological requirement to problematize the taken-for-granted and banal aspects of the present. Of Nietzsche’s (1980 [1874]) three types of history—the monumental, antiquarian, and critical—only the latter has the capacity to call into question “that particular level of experience which presents itself as not in need of further analysis” (Schultz, 1967 [1932]: 74).

The methodological tradition of urban morphology discussed above, on the contrary, has been characterized largely by an antiquarian obsession with urban form, which I have attempted to resist in the present study. Antiquarian history seeks to preserve the past as a means of giving thanks for the present’s origins. This approach
has a tendency to legitimize the present by providing it with a set of “foundations” historically rooted in a continuous past. An example will briefly illustrate this in the context of the morphological literature on the grid.

In his classic study, “The Origin and Spread of the Grid-Pattern Town,” geographer Dan Stanislawski (1946) seeks to trace the origin and diffusion of the grid plan from Antiquity to the Spanish conquest of the “New World.” The main assumption underlying his analysis is that the grid “may have been a one-time invention which has spread from its source region until it encompasses the globe” (Stanislawski, 1946: 105). The search for the true “origin” of the grid led Stanislawski to the ancient city of Mohenjo-Daro (in British India at the time of his writing, now in Pakistan), and he argues that all subsequent grid plans derive from the tradition of Indian town planning. The grid emerges from his analysis almost as a Platonic Ideal Form that becomes manifest through the continuity of tradition, and the scholar’s task is to trace this continuity back to its original fountain of purity in order to decipher the inherent meaning of the grid.

Following Foucault’s elaboration of Nietzschean genealogical analysis, a critical spatial history sets itself apart from traditional urban morphology to the extent that the former “opposes itself to the search for ‘origins’” (Foucault, 1984a: 77). Critical spatial history, as I conceive it, should also problematize the privileged conceptual status given to urban form itself. As I have argued above, the analytical focus on geometric form has actually limited most conceptualizations of the production of abstract space, since it has resulted in neglecting a critical examination of the politics of sequential landscape numbering.
Instead of viewing the practice of quantification as an unquestioned epistemological virtue, one of my principal methodological strategies is to redirect the gaze of scholarly inquiry upon the spatial politics of quantification itself. Rather than serving as the taken-for-granted standard of veridical judgment, the spatial practice of attempting to construct the world as a legible, calculable coherency itself is what is at issue. These methodological considerations are most explicitly examined in Chapter 3, but the entire study can be seen as an attempt to call into question the taken-for-granted geography of logic and number by problematizing what Foucault (1991b: 75) calls its “false self-evidence.” Cameron’s declaration at the beginning of this chapter would have us believe that the “grid” (in all senses of the word) is now an “inescapable fact.” Yet, what if all this hype about the “triumph of the grid” (Cameron, 2003: 11) was just another way of naturalizing and aestheticizing the taken-for-granted rather than inquiring into the precariousness of its historical emergence? Instead of aestheticizing the grid, I am suggesting that we should *politicize* the spatialization of the number.
2. GOVERNMENTALITY, GEOGRAPHY, AND THE GEO-CODED WORLD

To pose the problem in terms of the State means to continue posing it in terms of sovereign and sovereignty, that is to say in terms of law. If one describes all these phenomena of power as dependant on the State apparatus, this means grasping them as essentially repressive . . . . I don’t want to say that the State isn’t important; what I want to say is that relations of power, and hence the analysis that must be made of them, necessarily extend beyond the limits of the State. In two senses: first of all because the State, for all the omnipotence of its apparatuses, is far from being able to occupy the whole field of actual power relations, and further because the State can only operate on the basis of other, already existing power relations.


I. Introduction

Within the last decade Foucault’s (1991a) analysis of “governmentality” has influenced scholars in a range of disciplines—from anthropology, history, and political science to sociology, cultural studies, and geography.12 Foucault’s theorization of “disciplinary power” garnered considerable attention during the 1980s and still remains important today.13 However, the focus on disciplinary power has in many ways been eclipsed by the more recent emphasis on both the practices of “individualization” and “totalization” that together form the epistemological matrix of governmental rationalities. The Foucauldian-inspired governmentality literature has not produced a unified theoretical approach or perspective, yet most studies of

12 For instance, see Rose and Miller (1992); Barry et al. (1996b); Dean (1999); Rose (1999); Braun (2000); Hannah (2000); Merry (2001); Ferguson and Gupta (2002); Robins (2002); Bratich et al. (2003); Joyce (2003); Eudaily (2004); Larner and Walters (2004); Agrawal (2005); and Walters and Haahr (2005).
13 Much of the current interest in surveillance, including the journal Surveillance & Society, can be traced back to Foucault’s Discipline and Punish (1995 [1975]).
governmentality share a common concern for critically examining the role that
knowledge production has played in the formation of modern governmental practices.

Although various geographers have drawn upon, critiqued, and contributed to
the emerging literature on governmentality, very little theoretical work has traced the
linkages between geographical scholarship and governmentality studies. In this
chapter, I begin by offering an overview of Foucault’s conception of governmentality.
I then provide a critical reading of the emerging literature on the “analytics of
government” that takes Foucault’s analysis of governmental rationalities as its point
of departure. Next, I consider the ways in which geographers have critically engaged
the governmentality literature. By exploring Foucault’s analysis of governmentality, I
am not suggesting that geographers should uncritically embrace his findings as some
sort of grand theory to merely be “applied” to the field of geography. On the contrary,
I contend that critical traditions in geography have as much to offer to the field of
governmentality studies as the latter has to offer to geographical inquiry.

A number of geographers, for instance, have questioned Foucault’s analysis of
the shift from territory to population as one of the defining characteristics of modern
governmentality (Ó Tuathail, 1996; Braun, 2000). The issue is not that Foucault is
wrong to point to the problematic of “population” as a significant transformation in
the practices of government (as I shall describe below). Rather, as Ó Tuathail (1996:
8) convincingly argues, the main problem is that “Foucault’s own observations on the
changing place of space and territory in the history of the art of government are
underdeveloped and potentially confusing,” in large part because Foucault did not
Ó Tuathail (1996) argues that geographical knowledge production and the ordering of space were absolutely central to the formation of modern government, and he refers to such spatial practices as constituting the problematic of “geo-power.” Ó Tuathail (1996: 7) defines geo-power as “the functioning of geographical knowledge not as an innocent body of knowledge and learning but as an ensemble of technologies of power concerned with the governmental production and management of territorial space.” One of the main arguments of the current chapter is that “geo-power” is a fundamental prerequisite for what Foucault calls “biopower,” as I shall elaborate upon in the concluding section. To be more specific, I shall argue that the practice of geo-coding (broadly defined) provided the geographic foundation which linked governmental knowledges (both statistical and cartographic) with the governed population by constructing a “geo-coded landscape.”

Geo-coding, I maintain, has a history that extends far beyond the spatially integrated databases of twenty-first century GIScience. It is more than simply a geo-computational technique, since it often entails the construction of a “spatial regime of inscriptions”14 that is literally, as Pickles (2004: 5) points out, “written on the surface of the earth” itself. In other words, its condition of possibility is a spatial regime of inscriptions sequentially marked out on the Earth’s surface, thereby producing what Pickles (2004) calls a “geo-coded world.” What I am suggesting in the present study is that the spatial practice of house numbering should be at the very center of a genealogy of geo-coding and that such a practice is a principal geographic basis of what Foucault identifies as a biopolitics of the population.

The history of house numbering, of course, is inseparable from the establishment of private property relations. Not only did house numbering offer a means of property identification, it was also seen as a way of “economizing time” by reducing the amount of time spent searching for the business or residence one sought to find, thereby speeding up the potential rate of the circulation of capital (at least theoretically). Although governmentality studies can offer insights into the house number as a technology of governmental knowledge production (Joyce, 2003), it currently lacks the analytical tools needed to understand how the production of abstract spaces has historically been related to the contradictory processes of capital accumulation, the circulation of commodities, and the creative destruction of urban landscapes. Marxian urban theory, on the other hand, has produced an important body of literature examining precisely these issues (Berman, 1988 [1982]; Lefebvre, 1991 [1974]; Harvey, 1996; 1999 [1982]; Merrifield, 2002). In the concluding section of this chapter, I consider the potential of a “critical encounter” (Milchman and Rosenberg, 2002) between governmentality studies and Marxian geography.

Many geographical accounts consider governmentality in terms of the mechanisms of knowledge production that sovereign states have used to constitute their subjects and territories as “governable.” While this line of inquiry has produced considerable insights, I argue that analyses of governmentality should also explore how the spatial practices of governmental knowledge production are related to the circuit of capital, thereby including an analysis of the interplay between state and non-state actors. I am not arguing that geographers and governmentality theorists should stop studying the “governmentalized” state. I do maintain, however, that
governmentality is not confined to the state, so we must take into account the various “governmental” projects of non-state actors in addition to considering what Scott (1998: 9) calls “state projects of legibility and simplification.”

To use a contemporary example, the International Red Cross is currently a key player in the biopolitics of populations. Governmentality studies should not simply ignore the biopolitical projects of such non-state actors as somehow being of lesser importance than if the state itself were engaging in the very same activities. The broad scope of Foucault’s notion of “government,” I would argue, does not necessarily make it “unworkable” or “chaotic” but rather enables one to consider the interplay between state and non-state practices of government. Although it is true that Foucault (1991a: 103) was largely interested in examining the “‘governmentalization’ of the state,” Agnew (2005: 439) rightly points out that “Foucault is also the theorist who pointed to the conflict between the sovereign power of rules backed by sanctions and the actual daily experience of power exercised by a multitude of nonstate sources as a fundamental element of discourse and social practice.” The current chapter contends that if we are to understand the relations between the ordering of geographical space and the governmentalization of the state, then we must leave open to possibility that certain technologies of individualization and totalization may have arisen beyond the state (to serve various “convenient ends”) and were only later appropriated by the apparatuses of state power.

II. Biopolitics, Government, and the Technologies of Power

In a lecture given at the Collège de France in 1978, Foucault offered a conceptual schema for analyzing the problematics of government. This lecture was
published in the journal *Ideology and Consciousness* a year later (Foucault, 1979), yet it was not until the publication of *The Foucault Effect: Studies in Governmentality* in 1991 that Foucault’s discussion of governmentality reached a wider audience in the English-speaking world (Burchell *et al.*, 1991).\(^{15}\) Foucault’s work on governmentality stems from his general interest in the development of disciplinary power, biopolitics, and the technologies of subjectification (Foucault, 1983). The mechanisms of disciplinary power, according to Foucault, developed during the seventeenth and eighteenth centuries in various different institutional contexts—such as the military, the Church, and the prison—yet they were all characterized by the detailed regulation of the individual body, or what Foucault (1990 [1978]: 139) calls the “anatomopolitics of the human body.” As Foucault (2003: 242) puts it, “discipline tries to rule a multiplicity of men to the extent that their multiplicity can and must be dissolved into individual bodies that can be kept under surveillance, trained, used, and, if need be punished.”

If disciplinary power has the individual body as its object, “biopower” attempts to regulate and manage entire populations, and Foucault (1990 [1978]: 139) refers to these regulatory controls as the “biopolitics of the population.” These two types of power, Foucault (1990 [1978]: 139) argues, constituted the “two poles around which the organization of power over life was deployed” from the eighteenth century to the present. It is important to note that Foucault does not conceive of discipline and biopower as two opposing forms of power. Rather, the disciplinary strategy of “individualization” was closely aligned with—and one might argue the

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\(^{15}\) Unfortunately, Foucault’s (2004) lectures on *Sécurité, Territoire, Population* have not yet been published in English translation.
prerequisite for—the biopolitical techniques of “totalization,” or the construction of populations as objects of government.

By analyzing the technologies of disciplinary power and biopower, Foucault sought to direct attention away from the dominant focus on juridical power—especially the juridical model of sovereignty that views power “as a right which can be possessed in the way one possesses a commodity” (Foucault, 2003: 13)—and towards the actual deployment of power through the mechanisms of knowledge production and the constitution of subjectivities (Foucault, 1991a; 2003). It is not that sovereignty is insignificant or disappears but rather that during the eighteenth century the state became “governmentalized,” or, in other words, there developed an “ensemble formed by the institutions, procedures, analyses and reflections, the calculation of tactics . . . which has as its target population, as its principal form of knowledge political economy, and as its essential technical means apparatuses of security” (Foucault, 1991a: 102).

Foucault questions the simple equation of “government” and “the state” by critically examining the historical emergence of the “art of government” as a discourse and practice between the sixteenth and eighteenth centuries. He argues that during the sixteenth century, the discourse centered on giving “advice to the prince” (epitomized by Machiavelli’s The Prince) gave way to a new discourse on the art of government. Whereas the former was, according to Foucault, chiefly concerned with establishing the legitimacy and strength of the sovereign over a bounded territory, the basic premise of the art of government was, in Guillaume de La Perriere’s words, that “government is the right disposition of things, arranged so as to lead to a convenient
end” (Foucault, 1991a: 93). Foucault (1991a: 93) observes that this definition of
government shifts the focus away from the sovereign’s control over territory and
towards the governing of a “complex composed of men and things.” Such a
conception of government can refer to *any* practice of which the objective is
establishing “the right disposition of things, arranged so as to lead to a convenient
end.” According to this logic, there can be a government of children, a government of
the family, a government of oneself, a government of the state, and even a
government of “souls and lives” (Foucault, 1991a: 87).

Foucault clearly distinguishes this notion of government from that of
sovereignty. He maintains that “what characterizes the end of sovereignty . . . is in
sum nothing other than submission to sovereignty”—that is, obedience to the
sovereign (Foucault, 1991a: 95). If the sovereign demonstrated his sovereignty by
“exercising his right to kill, or by refraining from killing,” the art of government
sought to provide the conditions of possibility for life and marked the beginning of
the development of a “life-administering power,” i.e., biopower (Foucault, 1990
[1978]: 136). The discourse on the art of government, Foucault argues, was closely
linked to the rise of the administrative monarchies during the sixteenth century as
well as the growing importance of “political arithmetic” (i.e., statistics) in the
development of “reason of state.” He highlights the importance of both mercantilism
and the science of police as the first attempts to incorporate the art of government into
the practices of sovereign power. Yet, Foucault argues that both still held the power
of the sovereign as their *raison d’être*. This was all to change during the second half
of the eighteenth and early nineteenth centuries with the rise of political economy and
the proliferation of statistics as a means of coming to “know” the governed.

No longer were statistics merely a means of benefiting the administrative
functioning of the sovereign state; now they were to serve as the basis for measuring
and regulating the target of government itself—population. It was at this time,
Foucault (1991a: 100) suggests, that:

population comes to appear above all else as the ultimate end of government.
In contrast to sovereignty, government has as its purpose not the act of
government itself, but the welfare of the population, the improvement of its
condition, the increase of its wealth, longevity, health, etc. . . . . population is
the object that government must take into account in all its observations and
savoir, in order to be able to govern effectively in a rational and conscious
manner.

If the rise of statistics during the eighteenth century led to the construction of the
population as the main object of government, this is not to say that the disciplinary
mechanisms of individualization or the instruments of sovereign power ceased to play
an important role at this time. Foucault (1991a: 102) maintains, rather, that “we need
to see things not in terms of the replacement of a society of sovereignty by a
disciplinary society and the subsequent replacement of a disciplinary society by a
society of government.” “[I]n reality,” he continues, “one has a triangle, sovereignty-
discipline-government, which has as its primary target the population and as its
essential mechanism the apparatuses of security.”

It could certainly be argued that Foucault’s understanding of sovereignty as
territorial control and the right to kill is theoretically limiting, especially in a
globalizing world where, as Agnew (2005: 438, italics removed) recently suggests,
“effective sovereignty is not necessarily predicated on and defined by the strict and
fixed territorial boundaries of individual states.” Recent critical commentators on Foucault’s work, such as Agamben (1998; 2005) as well as Hardt and Negri (2000; 2004), have reconsidered the question of sovereignty in relation to Foucault’s notion of biopolitics. Drawing on political theorist Carl Schmitt’s (1985 [1922]) definition of sovereignty as the ability to decide upon the “state of exception,” Agamben (1998: 6, italics removed) maintains that “the production of a biopolitical body is the original activity of sovereign power,” which leads him to conclude that “biopolitics is at least as old as the sovereign exception.” However, even if we follow these more nuanced notions of sovereignty, Foucault’s theorization of governmentality still seeks to expand our analysis beyond theories of sovereign power by distinguishing sovereignty from the other elements of governmentality: discipline and government.

Governmental rationality, or governmentality, is characterized by the proliferation of new “technologies of power” (Foucault, 1988: 18). This technical aspect of government—whether in the form of individualizing or totalizing technologies—has often been neglected in most traditional analyses of political power, which instead emphasize party politics, class conflict, or the instruments of sovereignty. Yet, these technical apparatuses of government are central to Foucault’s analysis, because it is through such technologies that power is actually deployed. Foucault’s aim is not to construct a general theory of power that privileges the technological, but rather to examine how power is operationalized. The key methodological move here is to “ask questions about the ‘how’ of power” (Foucault, 1983: 216). This enables Foucault to escape the metaphysical dilemma of attempting
to determine the “essential nature” of power, and instead he considers the more empirical question: by what means is power exercised (Foucault, 1983: 217)?

Writing at a time when neo-liberal ideologies and techniques of government were just beginning to emerge as a critique of the “welfare state,” Foucault was deeply interested in exploring the genealogy of liberalism as a critique of reason of state. He views liberalism not as the antithesis of governmental rationality but rather as a form of governmentality which produces subjects capable of performing their subjectivity through the practice of “freedom,” or the shaping of their own conduct through what Foucault (1988: 18) calls the “technologies of the self.” Therefore, while it is true that Foucault was concerned with examining the “governmentalization of the state,” he also insisted that “relations of power, and hence the analysis that must be made of them, necessarily extend beyond the limits of the State” (Foucault 1980: 122). This latter realization is crucial and I shall consider it in more depth in the concluding section of this chapter.

III. Governmentality Studies and the Analytics of Government

From the mid-1990s onward, scholars from disparate fields of study have critically engaged Foucault’s exploration of the emergence of modern

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16 Over a decade ago, Brenner (1994) critiqued Foucault’s emphasis on the “how” of power as a new form of functionalism. In an interview, Foucault (1989: 257-8) responded to similar criticisms, especially concerning his discussion of the panopticon in *Discipline and Punish*, with the following comment: “Certainly there was a functionalism in Bentham’s dream, but there has never been a real functionality of the prison . . . . It is thus necessarily to be in absolute bad faith in order to say that I presented a functionalist conception of the transparency of power . . . [since] all of these indications revolved around the theme of power as a series of complex, difficult and never-functionalized relationships, a series of relationships which in a certain sense never functions at all.” His critique aside, Brenner (1994: 701) himself concedes that “our understanding of welfare-state capitalism could benefit greatly from an analysis and theorization of the complex historical links between bio-power and the diverse institutional arrangements of capitalism.”
governmentality. The journal *Economy and Society*, in particular, has served as a forum for theorizing and debating the conceptual strategies of this interdisciplinary field of inquiry often referred to as “governmentality studies.” After over a decade of theorizing, governmentality studies has matured to the point that at least one textbook-style introduction to the field, Mitchell Dean’s *Governmentality: Power and Rule in Modern Society* (1999), has appeared. In his attempt to systematize governmentality studies, Dean (1999: 4-7) himself acknowledges “the impossibility of writing an introductory textbook to this field” given the fact that “[t]here is no one governmentality paradigm.” This may well be the case, yet there are various key concepts and theoretical positions that form the basis of most studies of governmentality, and Dean even provides a glossary of the new vocabulary of governmentality studies to aid the neophyte.

One of the main focuses of the governmentality literature is examining how the apparatuses of knowledge production and the rationalities of rule are implicated in the processes of governing individuals and collectivities. Such investigations of the “analytics of government” follow Foucault in giving priority to the “how” of government (Dean, 1999). The point here is to analyze the precise mechanisms of government in all their specificity rather than providing a general theory of the state. By investigating how regimes of truth constitute domains as “governable and administrable” (Dean, 1999: 29), governmentality scholars maintain that the idealism/materialism dichotomy is overcome since thought itself is seen as a material practice linked to a complex array of apparatuses of knowledge production that serve as the technical basis of governmentality.
Governmentality scholars also consider the ways in which political rationalities structure the sphere of governmental action by establishing “discursive fields characterized by a shared vocabulary within which disputes can be organized” (Rose, 1999: 28). Political rationalities aim to render reality intelligible and, thereby, amenable to government. There are, of course, multiple grids of intelligibility, and it is in the struggle between competing political rationalities that the politics of truth is played out. An analytics of government does not take “truth” for granted as the basis of its analyses; instead, the aim is to decipher the ways in which truth operates within the field of government and how political rationalities produce material effects through the deployment of technologies of government.

Combining Latour’s (1986; 1997 [1987]) discussion of “inscriptions” with Foucault’s analysis of governmentality, Miller and Rose (1990: 5) emphasize the materiality of discourse and insist that analyses of governmental rationalities should devote:

attention to the particular technical devices of writing, listing, numbering and computing that render a realm into discourse as a knowable, calculable and administrable object. “Knowing” an object in such a way that it can be governed is more than a purely speculative activity: it requires the invention of procedures of notation, ways of collecting and presenting statistics, the transportation of these to centres where calculations and judgments can be made and so forth. It is through such procedures of inscription that the diverse domains of “governmentality” are made up, that “objects” such as the economy, the enterprise, the social field and the family are rendered in a particular conceptual form and made amenable to intervention and regulation.

Technologies of government are of central importance to governmentality studies, because they operationalize governmental rationalities and construct the very “objects” of government as in some sense “knowable.” Foucault takes the development of statistics during the eighteenth century as the quintessential example
of a “technology” of government, yet governmentality scholars have subsequently explored a multiplicity of such governmental technologies.

Miller and Rose (1990) argue that technologies of government should not be seen as forming a unified matrix of governmental control. They suggest that the analysis of technologies of government should not overgeneralize the unity of such technical apparatuses of government, nor should their effectiveness be overestimated. On the other hand, if one fails to take into account the manner in which technologies of government construct fields of visibility that render governmental rationalities operable, then the relation between knowledge and power is obscured.

In examining the historical emergence of technologies of government, various governmentality scholars highlight the importance of cartographic mapping and the rationalization of space as key strategies of governmentality. “To govern,” says Rose (1999: 36), “it is necessary to render visible the space over which government is to be exercised.” The ordering and mapping of space as well as the rise of communication networks enabled the practice of “governing at a distance” (Miller and Rose, 1990; Barry, 1996; Rose, 1999). These networks were directly linked to the production of “striated” space (Deleuze and Guattari, 1987 [1980]), or what Barry (1996: 127-8) describes as “a space within which movements and flows are regulated in ways which enable authorities to act; a space that is measured, directed and standardized.” Likewise, a number of recent anthropological studies have acknowledged the importance of spatial ordering as a strategy of neoliberal governmentality in the age

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17 This phrase is borrowed from Latour’s (1986; 1997 [1987]) notion of “action at a distance” in the context of scientific knowledge production.
of privatized security systems and ever increasing global economic disparities (Merry, 2001; Ferguson and Gupta, 2002; Robins, 2002).

Historian Patrick Joyce (2003: 13-6) questions the view that technologies of government were the works of “an all-seeing state” and suggests that the model of the panopticon (“the one viewing the many”) be replaced by the omniopticon (“the many viewing the many”) as a more adequate way of conceptualizing liberal governmentality. Joyce argues that these practices produced new spaces of legibility that, in turn, led to the production of new forms of subjectivity. Not only did those who govern rely on such technologies of government, liberal governmentality “depended on inculcating calculation among those who were to be governed, shaping them as, quite literally, democratically accountable, and hence responsible, citizens” (Joyce, 2003: 24). It was through the formation of the calculating, self-regulating citizen, says Joyce (2003: 1), that liberal governmentality sought to achieve “the active and inventive deployment of freedom as a way of governing or ruling people.”

If much of the governmentality literature has focused on liberal and neo-liberal rationalities of rule (e.g., Barry et al., 1996a), Dean (1999: 131) also examines what he calls “authoritarian governmentality” and argues that both liberal and non-liberal political rationalities have often made use of similar technologies of government in the pursuit of a biopolitics of the population. However, he cautions that these similarities “should not blind us to the different elements of sovereignty and bio-politics they accentuate and the different ways they articulate them” (Dean, 1999: 147). If liberal governmentality seeks to govern through the “rule of freedom” (Joyce, 2003), authoritarian governmentality is based upon the construction of the

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18 For a detailed examination of this process, see Cohen (1999 [1982]).
obedient subject and aims “to neutralize opposition to authority” (Dean, 1999: 131).

In both cases, however, technologies of individualization and totalization have served as the epistemological foundations of governmental rationalities that attempt to remake the world in their own image.

IV. Geography, Governmentality, and the Question of Territory

Geographers have only begun to explore the implications that the analysis of governmentality might bring to bear on geographical inquiry. As one recent commentator puts it, “despite this growing concern with Foucault’s work [among geographers], there has been surprisingly little geographical engagement with the concept of governmentality and the ways in which the ‘art of government’ and the definition and mobilization of subjectivities is, in itself, necessarily spatialized” (Raco, 2003: 77). Although it is true that relatively few geographers have engaged with governmentality studies, it is worth pointing out that various geographers have recently begun to examine the relevance of governmentality within the context of political geography, historical geography, urban geography, cultural geography, cartography, and nature-society relations (Luke, 1996; Ó Tuathail, 1996; Murdoch and Ward, 1997; Blake, 1999; Blomley and Sommers, 1999; Braun, 2000; Hannah, 2000; MacKinnon, 2000; Moon and Brown, 2000; Barnett, 2001; Crampton, 2003; Raco, 2003; Watts, 2003; Barnett, 2005).19

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19 Huxley’s (2005) recent doctoral dissertation also provides a useful analysis of various “spatial rationalities” of government in the context of English and Australian urban planning.
Political geographers were among the first to engage with governmentality studies (Luke, 1996; Murdoch and Ward, 1997; MacKinnon, 2000; Raco, 2003). In general, such accounts tend to view governmentality as a technique of state power. For instance, Raco (2003: 78) claims that:

> with nation-states facing growing pressures on their traditional mechanisms of control, the Foucauldian focus on nation-state power would appear to be increasingly limited in its analytical value. However, the principles of government that Foucault laid down in his analysis of governmentality are still practised by liberal governments. As social, political and economic processes have become increasingly complex in recent decades, so the requirement for states to develop efficient and effective techniques for “governing at a distance” take on greater salience.

In his analysis, Raco often treats “government” and “the state” as synonymous terms. Raco (2003: 76) criticizes governmentality scholars for overemphasizing the coherence and totalizing nature of governmental (state?) programs, and he calls for a more dialectical analysis of governmentality. “There has been a tendency,” he maintains, “to neglect the extent to which programmes of government are internalized and translated by target communities” (Raco, 2003: 91). He goes on to argue that “in practice government agendas are far from totalizing. They are contradictory, contested and influenced by the actions of subjects who respond to government agendas in a variety of ways” (Raco, 2003: 91). While adopting what he refers to as a “Foucauldian, governmentalist” approach, Raco (2003: 77) stresses the need to shift the methodological focus away from “abstract theorizations” and towards “the empirical practices of government.”

Various other political geographers have also focused on governmentality largely as it relates to the state. In their examination of the statistical construction of the “national farm” as an object of government in nineteenth- and twentieth-century
Britain, Murdoch and Ward (1997) illustrate how technologies of knowledge production (e.g., statistics) do not merely describe an empirical reality but actually refashion that reality so as to fit the categories of the epistemological framework constructed in the first place. Murdoch and Ward’s definition of governmentality remains state-centered. “Governmentality,” they observe, “refers to the methods employed as the state both represents and intervenes in the domains it seeks to govern, and how territorial integration is thereby achieved” (Murdoch and Ward, 1997: 308).

While Murdoch and Ward focus on state projects of statistical inquiry at the national scale, MacKinnon (2000) examines how such national projects shape local governance structures. While he recognizes the importance of extra-state actors, MacKinnon’s own analysis focuses primarily on the “internal” workings of state apparatuses. He relies upon neo-Gramscian theories of state power yet argues that “the neo-Foucauldian emphasis on governmental technologies and practices specifies the precise mechanisms which give state authorities the reach and capability to monitor and steer the activities of local institutions” (MacKinnon, 2000: 311). MacKinnon (2000: 297) suggests, in other words, that the strength of governmentality studies is its detailed analysis of how government operates, but he maintains (rightly, I would argue) that these studies do not adequately account for “the social and economic bases of state power.”

If political geographers have contributed to the governmentality literature, it is also beginning to have an impact on the subfields of historical geography (Hannah, 2000), nature/society studies (Braun, 2000; Watts, 2003), urban geography (Blomley
and Sommers, 1999), and cartography (Crampton, 2003). The most sustained book-
length examination of governmentality by a geographer is Matthew Hannah’s
Hannah’s work is a major contribution to the governmentality literature in geography,
and it has influenced scholars outside of the discipline as well (Joyce, 2003). The
basic premise of Hannah’s book is that the national census was instrumental in
constructing a field of intelligibility within which the American population could be
governed. Hannah draws not only on the notion of governmentality but also on
Foucault’s broader theorization of discourse analysis to explore the process of census-
taking in nineteenth-century America.

Hannah concentrates mainly on biopolitical projects instigated by the state and
combines Foucault’s analysis with critical state theory. His chief aim is to utilize the
governmentality perspective as a means of illustrating his own theory of the “cycle of
social control,” which consists of three “moments”: observation, judgment, and
regulation (Hannah, 2000: 39). In order to regulate conduct, state officials must first
construct the material and institutional infrastructure to collect statistical knowledge
of the population, which provides the basis for making “normalizing judgments”
(Hannah, 2000: 40). Hannah (2000: 39) argues that the organization of space, or
territory, is absolutely essential to the process of social control and that
governmentality is based upon securing “epistemological access to all parts of the
territory and everything in it . . . . [in order to] make it possible to pin down and
distinguish different units of resources and especially people, to make them
susceptible to enumeration.” He recognizes, however, that such an epistemological
project did have its limits and that governmentality was not based upon a “perfect” knowledge of population and territory. Nevertheless, he contends that the collection of statistics, mapmaking, and the rationalization of space were fundamental prerequisites for the consolidation of state power.

Hannah emphasizes that such spatial orderings were not simply repressive impositions but were also enabling to the governed population itself (see Mann, 1993). As Hannah (2000: 128) explains, “an act of observation associated with a census requires that the agents of vision travel to their objects using the same infrastructure available to the objects themselves. The easier it is for government agents to move about, the easier it is likewise for the population at large.” If this is true, then the rationalization of space cannot merely be reduced to an expression of repressive power as Lefebvre (1991 [1974]) contends. Instead, the production of abstract space—while repressive in numerous ways—establishes the epistemological basis not only for state-centered disciplinary projects; it also provides a system of orientation, or frame of reference, for the “population at large.”

Although Hannah claims that the mastery of territory is an important component of governmentality (and draws on a substantial body of secondary literature to support this claim), his primary focus in Governmentality and the Mastery of Territory is the federal census and the collection of statistics rather than mapmaking or the ordering of space. Elden (2002: 959), for instance, points out that while Hannah does address both the organization of space and the production of

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20 The work of Lefebvre (1991 [1974]) has been instrumental in providing a Marxian critique of the production of abstract space. Governmentality theorists, such as Rose (1999), often criticize Lefebvre’s conception of state power as repression. While I agree that Lefebvre’s discussion of the “intrinsic repressiveness” of abstract space is reductionistic (see Chapter 3), there is much that can be gained from critically engaging Lefebvre’s dialectical analysis of the contradictions of abstract space.
statistical knowledge, “[t]hese two areas are unfortunately not explicitly linked, which seems a missed opportunity, given the importance of mathematical techniques to the production of American space. Indeed, despite the title, analysis of territory itself, and the politics of map-making takes rather a minor role compared to other concerns.” This critique seems justified given Hannah’s primary focus on the census as opposed to cartography or the production of abstract space. Nevertheless, Hannah’s work provides a useful point of entry into larger theoretical debates concerning the relation between governmentality and geography.

If Hannah can justly be criticized for not focusing on “the mastery of territory,” this criticism cannot be made of Braun’s engagement with the governmentality literature. In his article, “Producing Vertical Territory: Geology and Governmentality in Late Victorian Canada,” Braun (2000) draws on the governmentality literature to examine the geological survey of Canada conducted by George Dawson in 1878 while also linking his discussion to recent debates concerning the social construction of nature (Braun and Castree, 1998; Castree and Braun, 2001). Braun (2000: 12, italics removed) critiques the current governmentality literature by arguing that few have explored how governmentality and biopolitics “brought the state directly into contact with its territory—and more precisely with the qualities of this territory.”

Braun argues that Foucault himself took “territory” and “nature” as a given and did not thoroughly problematize them—focusing instead on notions of human “population.” As Braun (2000: 13, emphasis in original) puts it, “one cannot understand ‘governmentality’ apart from how the territory of the state is brought into
being as a space of *difference*, any more than one can understand forms of state rationality apart from the historical emergence of ‘population’ as a problem of government.” Geologic surveys, says Braun (2000: 28), were an important governmental technology which “involved bringing the qualities of the state’s territory into the domain of political rationality.” His main point is to argue that “[t]o Foucault’s concept of governmentality must be added the problem of nature’s intelligibility” (Braun, 2000: 28). Braun demonstrates how the discourse of geology in nineteenth-century Canada produced the notion of “verticality” as a way of seeing geologically so as to increase the “productive” capacities (in a capitalistic sense) of the population.

Braun is breaking new ground here because much of the current governmentality literature coming out of sociology and the other social sciences focuses much more on the “social” to the neglect of governmental knowledges of the physical sciences (including physical geography). Braun also recognizes that issues of class and capital accumulation cannot simply be disregarded. However, although he does find common ground with the Marxist notion of the “production of nature,” he argues that this view is “insufficient” and too narrow (Braun, 2000: 13). Braun (2000: 14) seeks to provide a broader definition of the social production of nature by focusing on “how nature is continuously reconstituted at the intersection of multiple, interwoven practices.” In particular, Braun explores how nature is “enframed” in a variety of ways, and he argues that “[s]cience, governmentality and capitalist production comprised different, interwoven threads of nature’s production” (Braun, 2000: 39). Braun’s attempt to bridge the gap between governmentality studies and
Marxian geography in order to reexamine the question of territory highlights the importance of geographical knowledge both to the establishment of governmental power and the commodification of the landscape.

Blomley and Sommers (1999) also bring together the insights of governmentality studies (Rose and Miller, 1992; Rose, 1993; 1996) and Marxian critiques of the production of abstract space (Lefebvre, 1991 [1974]; Harvey, 1996) in their study of “cartographic struggles” in Vancouver. They argue that property relations have a “special significance in governmental discourse” and that cartographic mapping not only represents “reality” but is a strategy for “acting upon the real” in order to govern the conduct of conduct (Blomley and Sommers, 1999: 263-5). Blomley and Sommers examine the practice of mapping as a field of contestation and struggle, rather than solely as a top-down imposition of state power. Their analysis of the spatial politics of urban mapping takes seriously the possibility that governmentality is not confined to the state but rather that non-state actors (such as community groups) can utilize technologies of government to suit their own ends.

In his recent book, *The Political Mapping of Cyberspace*, geographer Jeremy Crampton (2003: 17) suggests that governmentality should be conceptualized not merely as a tool of state power but instead as a “contact point” between “technologies of the self” and “technologies of power and domination.” Whereas Hannah’s (2000) focus is the federal census, Crampton explores the possibility of a “critical politics” of cartographic mapping in the digital age. Crampton (2003: 61) critiques the manner in which maps have been used as normalizing devices, and he argues that a critical politics of mapping “opens and allows intervention in the struggle over the
deployment of power-knowledge effects.” One of the aims of such a critical politics, for Crampton (2003: 61), is to question, or problematize, the necessity of viewing cartography only in terms of the mapping out of “a Cartesian set of things located in space.” Similar to Blomley and Sommers (1999), Crampton views the production of cartographic knowledge as a site of political struggle. This recognition of struggle over the use of cartographic technologies of government moves beyond strictly state-centered conceptions of governmentality and examines how both state and non-state actors play a significant role in constructing governmental rationalities.

V. Geo-power as a Prerequisite of Biopower

While there has been a major focus on the importance of statistics and mapping as technologies of government, less attention has been devoted to explicitly theorizing the precise relations of statistical knowledge, mapping, and the production of abstract spaces. For instance, is one of these technologies of government the prerequisite for another? If social statistics are central to the biopolitical practice of managing entire populations, is not the construction of a geo-coded world the “spatial prerequisite” (Hannah, 1992) for such biopolitical projects? In short, is not geo-power a prerequisite for biopower? I would answer affirmatively, which is why I take geography (as both a disciplinary form of spatial knowledge and as the spatial organization of the Earth’s surface) to be so important to understanding the development of governmentality.

Although I stress the importance of geographic “inscription” as a key element of geo-power, I take seriously Gregory’s (1998: 11, emphasis in original) cautious suggestion that critical human geographers should engage in “a spatial analytics that
does not treat space as an empty surface marked by the inscriptions of power and knowledge but which discloses the implication of spatiality in the production of power and knowledge.” By no means do I assume that the production of a spatial regime of inscriptions is the workings of a pre-existing “knowledge” that is inscribed upon an empty space by an already-constituted “power.” Rather, I maintain that the ordering of space is itself one of the requisites for producing governmental power/knowledges. It is in this sense that I insist that geo-power is the basis of a governmentalized biopolitics. To state the argument in concise terms: the biopolitical project of managing “populations” by examining statistical regularities and mapping these patterns out cartographically (i.e., totalization) is only possible once a “population” has been individualized (via recordkeeping practices of various kinds), which in turn depends upon being able to locate “individuals” spatially (hence the current focus on the making of a “geo-coded world”).

The production of the “geo-coded landscape” is an inherently geographic process, and if governmentality scholars seek to understand the spatiality of governmental rationality, it is important to conduct further research into the historical geography, or “spatial history,” of the geo-coded world. It may well turn out that the reason why critical geographers have so much to offer to the analysis of governmentality is that, quite simply, geographical knowledge and the ordering of space have been at the heart of governmental rationality from its very inception. It is not a mere coincidence, for instance, that both census-taking and the development of house numbering systems arose together during the eighteenth century. The early history of house numbering provides crucial insights into understanding the complex
interplay between state and non-state actors with respect to the governmentalization of urban space (see Chapter 4).

Although the governmentality literature offers considerable insights into the linkages between spatial individualization and governmental power, it provides relatively little theoretical guidance to understand how such spatial practices were situated within the context of the creative destruction of urban spaces that occurred during this same period of U.S. history. The Marxian geographical tradition, on the other hand, has much to offer. One way of linking governmentality studies with Marxian geography is to examine governmental knowledge production in relation to the circuit of capital and the production of abstract spaces. Although we must be cautious to avoid reducing the “moment” of governmental knowledge production to an economic base, we should also be wary of attempts to privilege the moment of knowledge production (and the related formation of subjectivities) as the only process that deserves critical scrutiny. As Hall (1996: 37) rightly argues, the circuit of capital “consists of several interconnected moments” and if “we privilege one moment only . . . or if we use categories of thought, appropriate to one such moment alone, to explain the whole process; then we are in danger of giving what Marx would have called (after Hegel) a ‘one-sided’ account.” This should certainly be kept in mind in any project of a “critical encounter” (Milchman and Rosenberg, 2002) between governmentality studies and Marxian geography.

One danger of focusing our attention on how governmental knowledge production is linked to the circuit of capital, however, is that such an analysis may result in what Gibson-Graham (1996: 6 and 41) calls a “capitalocentric” approach to
political economy, which “involves situating capitalism at the center of development narratives, thus tending to devalue or marginalize possibilities of noncapitalist development.” The question of how to tie together studies of governmentality and capitalism was recently debated in the pages of the *Singapore Journal of Tropical Geography*, where Gibson-Graham (2003) criticize Watts (2003) for dismissing existing alternatives to capitalist economic activity and for stressing the importance of what he refers to as “the great clanking gears of capital” (Watts, 2003: 29). I am sympathetic to Gibson-Graham’s critique of capitalocentrism, but I do not think that this necessarily must imply a complete disregard for examining the relations between governmentality and the circuit of capital, so long as they are considered as “a set of concrete specificities” (Gibson-Graham, 1996: 15).

In my view, the purpose of a critical encounter between governmentality studies and Marxian geography is not to construct a grand synthesis of these two traditions in a Hegelian-style dialectic of reconciliation. There are certainly tensions between governmentality studies and Marxism (just as there are theoretical conflicts within both traditions), yet I find it more productive to consider the possibility of seeing them as *creative* tensions rather than necessitating hostile attacks and counterattacks. The intersection of governmentality studies and Marxian critical state theory (Jessop, 1990; Brenner *et al.*, 2003) provides one potential area for future research along the lines of such a critical encounter (for a useful starting point, see Hannah, 2000). In this chapter, I have suggested that another approach—which need not be seen as mutually exclusive with the former—is to take seriously Foucault’s (1980: 122) statement that “relations of power, and hence the analysis that must be
made of them, necessarily extend beyond the limits of the State.” This approach shifts the focus of an analysis of governmentality beyond a consideration of state governmental techniques by examining how various non-state actors have also constructed governmental rationalities and utilized technologies of government (which, in some cases, were subsequently integrated within state apparatuses of government).

I have further suggested that exploring the spatial history of the “geo-coded world” is required if we are to understand the geographical underpinnings of governmental knowledge production. One of the basic aims of a critical spatial history of the geo-coded world should be to illustrate that there is a spatial politics even to a practice as seemingly technical and apolitical as house numbering as well as a political economy of governmental knowledge production. The purpose of such an analysis is not to reduce politics to the technical. Just the opposite, it is to provide the analytical tools necessary for illustrating that the technical itself has a politics, which opens the possibility of viewing the realm of the technical as a potential site of democratic struggle and contestation instead of a restricted domain of depoliticization. In the next chapter, I critique existing theories of spatial legibility and propose a conceptual framework for theorizing the relation between the ordering of space and the production of governmental knowledge, which expands upon the theoretical discussion from the present chapter.
3. SPATIAL LEGIBILITY, POWER, AND
THE FORMATION OF MATERIALIZED
EPISTEMIC SPACES

This book will consider the visual quality of the American city by studying the mental image of that city which is held by its citizens. It will concentrate especially on one particular visual quality: the apparent clarity or “legibility” of the cityscape. By this we mean the ease with which its parts can be recognized and can be organized into a coherent pattern . . . . Our thesis is that we are now able to develop our image of the environment by operation on the external physical shape as well as by an internal learning process.

— Lynch, *The Image of the City* (1960)

Sight and seeing, which in the Western tradition once epitomized intelligibility, have turned into a trap: the means whereby, in social space, diversity may be simulated and a travesty of enlightenment and intelligibility ensconced under the sign of transparency.

— Lefebvre, *The Production of Space* (1991 [1974])

I. Introduction

The “spatial turn” in social theory has led to an increasing interest in how space is implicated in modern power relations, capitalist commodification, and the formation of human subjectivities. The rationalization of space, or the production of abstract spaces, is generally viewed as a “hallmark of modernity” (Dimendberg, 1998: 23), and scholars from various intellectual traditions have either embraced or critiqued the basic modernist desires for legibility, order, and coherence with respect to the production of geographical space. In this chapter, I build upon the work of Foucault and Latour (as discussed in the previous two chapters) to provide a
theoretical framework for analyzing the precise manner in which Cartesian epistemology becomes “materialized” through the production of abstract spaces. I begin by considering a number of different approaches to the question of “spatial legibility” (Section II). In discussing such divergent theoretical perspectives, I argue that the “transparency” or “legibility” produced by the materialized coordinate grid is deliberately superficial—that is, it is an ordering scheme which places a premium on surface appearances and the apparent simplification of complex phenomena.

Instead of searching for the grid’s origin in some distant past as a means of determining its inherent meaning and rationality (Stanislawski, 1946), the current chapter explores the ways in which the coordinate grid has been utilized as the basis of (re)producing Cartesian subjectivities in the present while also enabling an entire regime of administrative rationality to be applied to both scientific practice and the spatial ordering of everyday life. In Section III, I provide a critique of the Cartesian pedagogy of space and argue that it naturalizes the coordinate grid as an instrument of the external gaze. In other words, Cartesian pedagogy trains the individual to view space as a neutral container of rationally ordered “objects” to be viewed from above, or from a distance, through a grid. Even more so, it renders “normal” the practice of physically ordering the spaces of everyday life according to the logic of Cartesian epistemology. To the extent that such pedagogical techniques are successfully “inculcated” (Penny, 1994: 232), we may say that it is through such practices that Cartesian subjectivities are formally reproduced and transmitted from generation to generation (although one should take into account the informal manner
in which Cartesian subjectivity is formed as well, e.g., through simply “inhabiting” gridded and numbered spaces).

As we shall see, such an analysis clearly demonstrates how the grid functions as a mechanism of disciplinary power, yet I also maintain that we must be cautious not to view the grid solely as a tool of social control by an external authority. In many instances, the abstract space produced by the materialized coordinate grid becomes the taken-for-granted order of lived experience for those who inhabit such spaces. Any analysis, therefore, which universally places lived experience in opposition to abstract space (Lefebvre, 1991 [1974]) thereby fails to account for the possibility that abstract space may actually be embraced by many of its inhabitants who have been trained to view the grid as “authoritative” (Carter, 1988: 210).

The social authority invested in the Cartesian grid stems from the fact that it has played a pivotal role in the formation of many of the “modern” sciences and is often viewed as one of the epistemological foundations of scientific rationality in general (Motz and Weaver, 1993; Akkerman, 1998). As Section III illustrates, however, the grid is not merely a scientific lens through which to view the world but rather an epistemic schema for the physical ordering and production of abstract space. It is through this process of spatial ordering that epistemology and ontology converge via the physical production of what I shall call “materialized epistemic spaces.” I use this term not as a metaphorical concept that simply borrows the vocabulary of spatiality to describe discursive phenomena. Rather, it is meant in a quite literal way to describe the process whereby an epistemological framework is physically inscribed into the spaces it thereby constructs (Latour, 1999). The question, then, is not “is this
epistemology true or illusory?” but rather “what does this epistemology enable one to do once it has been inscribed into a given materiality?” To put it in Foucauldian terms, what are the ways in which Cartesian epistemology “produces domains of objects and rituals of truth” (Foucault, 1995 [1975]: 194)?

For those still committed to a dualistic opposition between thought and materiality, the questions above might appear to privilege idealism over materialism by emphasizing to active role of thought in reshaping the world. One could easily reverse the apparent line of causation by instead asking, “given what people do (in a material sense), how does this influence or enable the construction of their epistemologies?”21 I would argue, however, that this materialist response—which appears to turn my initial question on its head by reducing it to a form of idealism—loses sight of the need to challenge the dualism between materiality and thought itself. This chapter does precisely that by providing a conceptual framework for exploring how spaces of concrete abstraction are produced through the inscription of an epistemology into the materiality of the landscape (hence the notion of “materialized epistemic spaces”). I contend that epistemology is not merely a form of “thought” but is itself a “material practice” and can, in a very real sense, be physically inhabited.

In Section IV, I examine the use of the Cartesian grid in the field of archaeology. I have chosen to consider the utilization of the grid in archaeological

21 On April 8, 2004, I presented a condensed version of this chapter at the Association of American Geographers (AAG) conference in Denver. One of the other presenters in the session questioned my line of argumentation in precisely this manner. My initial off-the-cuff response was to accept the terms of his critique yet insist upon a “dialectic” between thought and materiality as a theoretical solution. This response now seems inadequate to me, since it does not challenge the dualism between thought and material practice itself, which is the larger aim of this chapter.
excavation because it is a paradigmatic case of how the Cartesian grid establishes the basis for what I refer to, drawing on both Foucault and Latour, as a “spatial regime of inscriptions” through the production of a materialized epistemic space. This, in turn, provides the conditions of possibility for the administrative practice of geo-coded recordkeeping. I conclude with Section V by suggesting that the spatial ordering of the archaeological site—and the administrative rationality associated with such a spatial practice—is epistemologically homologous to the utilization of the coordinate grid in the ordering of gridded cities and towns in the age of modern governmentality.

II. Social Theory and the Politics of Spatial Legibility

The modernist desire to view “legibility” as both an epistemological virtue and a pragmatic necessity had a major impact on the way in which urban spaces around the world were designed and constructed throughout much of the twentieth century (Scott, 1998). Consequently, many critics who oppose modernist urban planning have devoted considerable attention to critiquing legibility as an illusory modernist trap which denies the contradictions of producing abstract space (Lefebvre, 1991 [1974]; Soja, 1996; Scott, 1998). How one approaches the question of spatial legibility, therefore, is highly revealing of one’s assessment of modernism as well as one’s spatial politics more generally. Before examining the various critiques of legibility, it will help to consider how legibility was constructed as a spatial virtue. To do so, I will first discuss the work of influential urban theorist Kevin Lynch, his advocacy of legibility (or imageability) as the hallmark of good urban design, and the cognitive mapping tradition which his approach inspired. Lynch was certainly not the
first to advocate for the principle of legibility in urban design (see Chapter 5), but his framework continues to influence contemporary planning theory today, which is the main reason that it is worth engaging in this context. After considering Lynchian cognitive mapping, I will then examine a number of critiques of spatial legibility as well as their implications with respect to the production of abstract space.

In 1960, Lynch published his now-classic study, *The Image of the City*, which was the culmination of urban field research that Lynch and his research associates at MIT’s Center for Urban and Regional Studies performed in Boston, Jersey City, and Los Angeles during the 1950s. The basic aim of this work was, as Lynch (1960: 2) puts it, to “consider the visual quality of the American city by studying the mental image of that city which is held by its citizens.” They conducted interviews with people in the three cities mentioned above, asked the participants to draw sketch maps of the respective cities, and then aggregated these individual sketches into an average “public image” of each city (Lynch, 1960: 7). He describes these public images as “the common mental pictures carried by large numbers of a city’s inhabitants” (Lynch, 1960: 7). In addition to interviews with city inhabitants, they also had a “trained observer” conduct a systematic “field analysis” of each city to evaluate its legibility, or what Lynch (1960: 143) calls its “imageability.” The basic “elements” of a legible city image, according to Lynch, are: paths, edges, districts, nodes, and landmarks.

From the very start, Lynch (1960: 3) contends that “legibility is crucial in the city setting,” and he suggests that this concept should be the basis of urban design in post-war America. Lynch (1960: 2-3) defines legibility as “the ease with which [a
city’s] parts can be recognized and can be organized into a coherent pattern.” He also uses the metaphor of the “text” as an illustration of the necessity of spatial legibility. “Just as this printed page, if it is legible, can be visually grasped as a related pattern of recognizable symbols,” says Lynch (1960: 3), “so a legible city would be one whose districts or landmarks or pathways are easily identifiable and are easily grouped into an over-all pattern.” As I discuss in the next two chapters, this comparison of the cityscape with the “printed page” has long been a rhetorical strategy used by those engaged in the production of “legible” spaces.

Lynch’s notion of “imageability” is similar, though not identical, to his conception of legibility. He uses this neologism as a means of referring to:

that quality in a physical object which gives it a high probability of evoking a strong image in any given observer. It is that shape, color, or arrangement which facilitates the making of vividly identified, powerfully structured, highly useful mental images of the environment. It might also be called legibility, or perhaps visibility in a heightened sense, where objects are not only able to be seen, but are presented sharply and intensely to the senses . . . .

Our purpose is simply to consider the need for identity and structure in our perceptual world, and to illustrate the special relevance of this quality to the particular case of the complex, shifting urban environment (Lynch, 1960: 9-10, italics in original).

A number of points are worth raising here. First, Lynch’s method relies heavily on a form of psychological individualism (although he does attempt to aggregate this individual “data” into a composite public image as described above). In other words, his chief concern is the “average” individual’s perceptual encounter with the urban environment. Second, he insists that there is an almost instinctual “need for identity and structure in our perceptual world,” which is continuously being disrupted by the “shifting” nature of modern urban geographies. Lynch suggests that the need for
legibility is universal, although he does acknowledge that the form it takes in different cultures may vary (Lynch, 1960: see Appendix A).

Given his emphasis on the psychology of urban perception, Lynch does not provide an explanation of how or why urban environments are “shifting” nor does he explicitly consider the fact that advocacy for imageable identities and legible structures—a project in which he is passionately engaged—is itself a form of spatial politics. In fact, the political and social context within which urban design takes place is largely absent from Lynch’s analysis. Nevertheless, he clearly aligns his work with a vision of modern city planners as “manipulators of the physical environment,” which is taken as a compliment in this context (Lynch, 1960: 7).

Lynch’s main goal was to provide empirical evidence for the importance of spatial legibility through innovative methodological techniques that incorporate the average urban inhabitant’s perspective into the city planner’s approach to urban design. However, one key methodological flaw in his study, which Lynch (1960: 15) himself points out, is that his sample sizes were relatively small and consisted primarily of white middle-class participants from “the professional and managerial classes” (Lynch, 1960: 15). This raises the question of what exactly it means to speak of the “average” public image. Lynch (1960: 15) seems to imply that if he had only had larger sample sizes, and included subjects from various different socio-economic classes, then perhaps a “true” public image of each city could have been attained or at least approximated. Yet, we might reasonably wonder if such a method of aggregation privileges the average public image at the expense of exploring the differences between contradictory conceptions of the city. While he admits that “age,
sex, culture, occupation, temperament, or familiarity” play a role in an individual’s cognitive image of the city, Lynch (1960: 7) does not seem to view this as somehow rendering aggregated public images problematic.

Lynch’s work was widely read by geographers, psychologists, and urban planners and paved the way for further research into what is generally known as “cognitive mapping” (Downs and Stea, 1973; Gould and White, 1974; Downs and Stea, 1977; Golledge, 1999b; Kitchin and Freundschuh, 2000). The field of cognitive mapping is not only concerned with urban environments. Rather, cognitive mapping is generally conceived as the study of “those cognitive and mental abilities that enable us to collect, organize, store, recall, and manipulate information about the spatial environment” (Downs and Stea, 1977: 6). In the discipline of geography, cognitive mapping research played a major role in the development of the subfield of behavioral geography during the 1970s. Some geographers turned to cognitive mapping and behavioral geography as a reaction against the tradition of spatial analysis while others viewed it as an extension of spatial science methods (Gold, 1992).

As Gold (1992) notes, both Marxist and humanistic geographers criticized behavioral geography for its positivist epistemology, thereby marginalizing cognitive mapping in the field of human geography. During the 1990s, however, cognitive mapping research made a comeback encouraged by the National Center for Geographic Information and Analysis, funded by the National Science Foundation (Kitchin and Freundschuh, 2000). As was the case in the 1970s, there is a strong desire in the current literature to use cognitive mapping as a way of solving “spatial
problems.” Different strategies of “wayfinding” in known and unknown environments are emphasized (Golledge, 1999b), and the Lynchian “need for identity and structure” is one of the underlying conceptual foundations of much of this recent work. The subjective/objective dualism of positivism is generally retained, and “distortion” or “error” in individual cognitive maps is often measured using the yardstick of “objective” scientific cartography.22

The recent call for incorporating cognitive mapping research into the development of GIS software and in-car navigation systems illustrates the close epistemological affinities between cognitive mapping and spatial analysis (Kitchin and Freundschuh, 2000). As cognitive mapping aligns itself with geo-spatial technology in the twenty-first century, its “praxis” becomes clearer. One of the chief aims of such research, according to two experts in the field, should be to offer technical assistance to:

those involved in professional spatial searches (e.g., police, mountain rescue), by providing an indication of likely patterns of spatial behavior of those being searched for. In relation to the police it is believed that cognitive mapping research can highlight the likely spatial behavior of criminals, allowing police to predict approximate locations of the offender’s residence and future targets (Kitchin and Freundschuh, 2000).

Cognitive mapping, it seems, is remarkably compatible with an administrative rationality of social control (discipline), on the one hand, and the biopolitical demand for preserving “life” at risk on the other (e.g., mountain rescue and other emergency services). In most cases, this line of research leads to a spatial politics of maintaining

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22 Golledge (1999a: 13), for instance, makes the distinction between “objective physical reality” and “subjective worlds,” thereby reaffirming the positivist dualism of the objective/subjective. For a pragmatist critique of this dualism, see Rorty (1999).
the social order of existing power relations in its search for legibility, structure, and identity (for an exception, see Jameson, 1988).

By contrast, social theorists have criticized the positivistic dream of constructing a legible world. Marxists such as Lefebvre (1991 [1974]) argue that positivistic accounts of legibility do not take into account the politico-economic context which provides the condition of possibility for positivistic theorizing in the first place. If Lynch views spatial legibility as liberating, Lefebvre finds it a repressive tool of social control. Where Lynchian cognitive mapping sees identity, transparency, and order, Lefebvre sees a veil of mystification cast over the contradictions of capitalist social relations. Lefebvre maintains that abstract space is a spatiality of domination and repression. “Abstract space,” says Lefebvre (1991 [1974]: 318, italics in original), “is thus repressive in essence and par excellence,” and he continuously critiques the “intrinsic repressiveness” of rationalized space. For Lefebvre, abstract space is a signifier of prohibition and exclusion. It dominates, crushes, and pulverizes the “lived experience” of the inhabitants of such a space. “Prohibition—the negative basis, so to speak, of the social order—is what dominates here,” argues Lefebvre (1991 [1974]: 319). The abstract space of the grid, from this perspective, appears as a technology of social control.

This view of the grid as a repressive tool of social control is also adopted by de Certeau (1984), who seeks to explore the various ways in which the “consumers” (or, in Lefebvre’s terms, the “users” or “inhabitants”) of abstract space can resist the strategies of disciplinary power by means of innumerable tactics. “If it is true that the
grid of ‘discipline’ is everywhere becoming clearer and more extensive,” de Certeau (1984: xiv-xv) argues:

it is all the more urgent to discover how an entire society resists being reduced to it . . . . the goal is not to make clearer how the violence of order is transmuted into a disciplinary technology, but rather to bring to light the clandestine forms taken by the dispersed, tactical, and make-shift creativity of groups or individuals already caught in the nets of “discipline”. . . .

In this respect, de Certeau is directly critiquing the Foucault of *Discipline and Punish* (1995 [1975]) for simply making “clearer how the violence of order is transmuted into a disciplinary technology” instead of examining resistance to the “grid of discipline.” In doing so, however, de Certeau seems to concede that the grid is solely an instrument of social control and repression.

Both Lefebvre and de Certeau, in their own ways, give lived experience primacy over abstract space in their critiques of everyday life. These arguments are quite appealing, yet what if it turns out that abstract space is not only repressive but also gives rise to new forms of subjectivity that actually come to embrace the apparent “transparency” of the grid? Carter (1988: 210, italics removed) suggests, for instance, that “the grid plan has not only been imposed from without: it has also been accepted from within. It has not only been the tool of authority: it has itself been accepted as authoritative.” Theories of everyday life that diametrically oppose abstract space with lived experience, then, should be considered with some caution, especially if abstract space has become naturalized over a period of decades or centuries as the taken-for-granted order of lived experience itself. In contrast to de Certeau’s focus on the tactics of resistance, I would contend that perhaps the more
important question is why so many people actually consent to the dictates of abstract space.

Abstract spaces acquire their “authoritativeness” by producing a transparency of surface appearances. As noted earlier, the transparency of the coordinate grid is deliberately superficial. The aim is to construct and maintain the appearance of spatial coherence, yet this is only possible on a purely formal level (as its presumed rationality does, in fact, mask the politics of producing and maintaining such spaces). While it can hardly be doubted that the coordinate grid has “an enormous organizational capacity,” it has also been argued that “what it lacks is precisely the fullness and complexity of reality which it must continuously diminish and regulate in order to work” (Berman, 1993: 4). This reduction of qualitative complexity to quantitative transparency led Lefebvre (1991 [1974]: 27) to call for a critique of “the illusion of transparency,” and he contends that the supposed legibility of abstract space is mired in contradiction.

The assumption that legible space is somehow “innocent” and “free of traps or secret places” is seen as an illusory attempt to reduce the world to an elusive coherence by “creating the illusion of a less chaotic reality” (Lefebvre, 1991 [1974]: 28 and 300). Lefebvre (1991 [1974]: 352) insists that there should be a “recognition of conflicts internal to what on the surface appears homogenous and coherent—and presents itself and behaves as though it were.” This dialectical critique of formal transparency correctly highlights the superficiality of abstract space, yet I disagree with Lefebvre’s (1991 [1974]: 298) argument that consent to such a superficial transparency is simply the result of “a false consciousness of abstract space.” As
mentioned earlier, the point is not so much whether a given epistemology (or epistemic space) is “true” or “false” but rather what types of spatial practices it renders possible.

It is certainly correct to argue that the transparency of abstract space is a superficial façade, and it is also true that abstract space is not “innocent” nor is it “free of traps or secret places.” Yet, this does not necessarily mean that the transparency and legibility of abstract space can simply be dismissed as “illusory.” Charging the abstract space of the grid with an “intrinsic repressiveness” is an oversimplistic essentialist theoretical position. Such a view fails to account for the fact that those who inhabit abstract space themselves often make use of its sequential ordering. It is not only the authorities in their helicopters who utilize the coordinate grid as a tool of disciplinary power (yet see Davis, 1990).23 Those who are “governed” by its superficial transparency also utilize this spatial façade for innumerable purposes—whether conformist, subversive, or otherwise.

In order to understand how the production of abstract space produces new forms of subjectivity, as opposed to merely repressing a pre-existing “lived experience,” one must explore the process of subject formation as it relates to the normalization of abstract spatiality as the taken-for-granted order of everyday life. Such a theoretical move, which I attempt in the next section, follows Foucault’s lead in examining power not only as a repressive force but also as a productive element in the constitution of subjectivities. In this context, “productive” should be seen not in a

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23 In his classic study of the “carceral city” of Los Angeles, Davis (1990: 252) makes the following observation: “To facilitate ground-air synchronization, thousands of residential rooftops have been painted with identifying street numbers, transforming the aerial view of the city into a huge police grid.”
normative sense (e.g., as in something to be universally affirmed) but rather refers to the process of producing identities through repetitive performance. In this sense, power/knowledge is seen as *performative* in that it “enacts or produces that which it names” (Butler, 1993: 13). As Butler (1993: 15) rightly argues, “[t]he paradox of subjectification . . . is precisely that the subject who would resist such norms is itself enabled, if not produced, by such norms. Although this constitutive constraint does not foreclose the possibility of agency, it does locate agency as a reiterative or rearticulatory practice, immanent to power, and not a relation of external opposition to power.” Following this line of thought, in the next section I critically examine how Cartesian pedagogy normalizes abstract space through the repetitive enactment of Cartesian subjectivity.

Analyzing the production of Cartesian subjectivity, however, is not enough. Equally important is understanding how an entire “regime of truth” (Foucault, 1980: 131) is enabled through the *materialization* of Cartesian epistemology. I would argue that Latour’s (1986; 1986 [1979]; 1997 [1987]; 1999) theorization of the process of “inscription” in the context of scientific practice provides the groundwork for explaining the manner in which epistemological frameworks become “materialized” as the basis of a “correspondence” theory of truth (see Section IV). For Latour, the legibility of scientific knowledge is not merely an illusion nor is it the work of the mind of genius. On the contrary, it is based upon the rather mundane process of constructing the world as a “laboratory” that is physically marked with inscriptional devices (Latour, 1999: 43).
Latour suggests that the act of inscribing and affixing reference numbers onto “objects” that are arranged in a structurally ordered space is central to modern scientific practice. As part of his ethnography of environmental scientists conducting fieldwork in the Brazilian rainforest, Latour (1999: 31) comments that:

In the thousands of years in which humans have traveled through this forest, slashing and burning in order to cultivate it, no one had ever before had the peculiar idea of attaching numbers to it. It took a scientist, or perhaps a forester designating trees to be felled. In either case, this numbering of trees is, we must assume, the work of a meticulous bookkeeper.

The attaching of numbers onto “objects” in a systematic fashion is only the beginning, however. These inscriptions are then used as a means of keeping track of the marked objects through the process of translating their materiality into a sign, which can then be circulated through the networks of scientific knowledge.

Latour compares this process of “scientific” inscription with the case of a restaurant in which all tables are inscribed with individual numbers as a means of identification. “If the [restaurant] owner had not written the number 29 in big black letters on the table on the terrace,” says Latour (1999: 29):

he would be unable to navigate his own restaurant; without such markings he would not be able to keep track of the orders or distribute the bills. He . . . needs inscriptions to oversee the economy of his small world. Erase the numbers inscribed on the table, and he would be as lost in his restaurant as . . . scientists would be in the forest without maps.

The numbers inscribed on the restaurant tables provide the epistemic basis for tracking orders so long as those same numbers are inscribed both on the tables and on the bills. In the micro-world of the restaurant, inscriptions can be seen as technologies for governing the economy of consumption.
There are innumerable examples from everyday life that one might imagine where inscription plays an indispensable role in the ordering of “things,” such as the numbering of houses in a city or town, the numbering of apartments in a building, or the numbering of seats in an auditorium. Latour points out that it is precisely through this same process of inscription that scientists come to “know” the world as well. There is no great divide, in other words, that separates the “scientific” use of inscriptions and their use in various other situations of everyday life. Latour’s analysis of inscriptions provides a useful theoretical framework for exploring—with analytical precision—the detailed manner in which epistemologies become materialized through the production of abstract spaces, which then provide the conditions of possibility for an administrative rationality that is so often utilized in scientific practice and the spatial ordering of everyday life.

III. “They Help You to Say Accurately Where Things Are”: A Critique of the Cartesian Pedagogy of Everyday Life

In *The Geographer at Work* (1985), Peter Gould provides a graphical depiction of desks in a school classroom laid out in a grid of rows and columns, and he suggests that this illustration can serve as a useful pedagogical device to train malleable young minds to appreciate the significance of the Cartesian coordinate system (Figure 3.1). “Counting desks, and locating friends, is a good way to start,” Gould (1985: 260) informs the reader, “and translates easily into more complex ideas of latitude and longitude.” The graphic in Gould’s book comes from a children’s
geography textbook by Cole and Beynon called, *New Ways in Geography* (1982 [1968]). In it, they instruct the young student to:

Look at the picture carefully. Each column has a number and each row has a number. You will see that some desks have been given numbers. The desks are numbered by putting first the number of the column of the desk and then the number of the row of the desk. June is in column 4, row 1. The number of her desk is (4,1). The reference for Ray’s desk is (6,3). These are called ordered pairs and are known as Cartesian coordinates. The two numbers must be put in the right order: (3,1) is not the same as (1,3).

Each desk has its own pair of numbers. When you have looked at the picture carefully, look at the diagram on the opposite page. There you will find the same classroom, but as you would see it from directly above . . . . If we draw a line up each column and another along each row, the desks are where these lines cross. In locating things in a room, in a town, on a map, you should put the column number first, then the row number. John’s and Jim’s desks have the same numbers but in different orders: John (5,6), Jim (6,5) (Cole and Benyon, 1982 [1968]: 8-9, italics in original).

In this idealized classroom setting, young students are taught the basics of Cartesian epistemology through the very layout of the classroom itself. Year after year, in
classrooms around the world, students are trained to learn the x’s and y’s of the Cartesian coordinate system, so we may say without much exaggeration that the acquisition of formal knowledge concerning the Cartesian grid has become a sort of “rite of passage” for entry into the so-called “modern world.”

It is worth taking this pedagogical exercise seriously, then, if we are to understand how the Cartesian grid has become naturalized as the taken-for-granted order of lived experience within the abstract spaces of “modernity.” First, let us consider what the authors do not mention in the example above. The young reader is not informed that the diagram leaves out the location of the teacher’s desk—that is, the seat of authority. In fact, the perspectival view of the drawing on the left side of Figure 3.1 is not from any student’s point of view at all but rather from the teacher’s vantage point at the head of the classroom. Since the students do not have access to this privileged gaze, they are instructed to imagine the scene “as you would see it from directly above,” as shown in the diagram on the right side of Figure 3.1. From this God’s-eye-view, the classroom is abstracted into a square matrix of rows and columns, and the students themselves are reduced to names and numerical coordinates inscribed within each grid-cell. This may very well be a simple way to teach children their Cartesian x’s and y’s, yet it is also one of the main techniques that teachers use to take attendance in large classes with assigned seating.

In this way, the Cartesian grid has served as a technology of governing the classroom through the production of what Foucault (1995 [1975]) calls “serial space.”

24 Notice, for example, that the locations marked “LEFT SIDE OF CLASSROOM” and “RIGHT SIDE OF CLASSROOM” only make sense if one is standing in the front of the classroom looking towards the students’ desks. The teacher’s “left” is, of course, the students’ “right” and vice versa, so from the students’ perspective the directional markers should be reversed.
Foucault (1995 [1975]: 147) maintains that “[t]he organization of a serial space was one of the great technical mutations of elementary education . . . . By assigning individual places it made possible the supervision of each individual and the simultaneous work of all.” From the teacher’s perspective, the classroom-as-Cartesian-grid functioned as a “disciplinary space” (Foucault, 1995 [1975]: 143), in which students could be individuated while also being organized as a distribution of bodies within the coordinate space of the grid. What Cole and Beynon, as well as Gould, portray as a useful pedagogical exercise to teach students the logic of the coordinate grid can also be read as an illustration of disciplinary power at work through the arranging of “objects” in abstract space. At the same time, the students are encouraged to view the scene as external observers either from the front of the classroom or from directly above. Students in Cole and Beynon’s Cartesian classroom are quite literally learning to live inside the grid. It is through such formal training that the Cartesian conception of space is naturalized as the spatial order of the social world.

Having worked through the exercises on “Places in the classroom showing coordinates,” the student then proceeds to the next chapter of Cole and Beynon’s text, “View from hill showing coordinates” (see Figure 3.2). Looking down from the hilltop, the rural landscape below appears remarkably similar to the classroom from the previous exercise, and Cole and Beynon do not let this fact go unnoticed. “From the hill on which we are standing in the picture,” they note, “we can see below a countryside laid out very tidily. We are going to use this to practise the coordinates
Figure 3.2: The rural checkerboard landscape as pedagogical device (Cole and Beynon, 1982 [1968])

we used to find the places of children in a classroom” (Cole and Benyon, 1982 [1968]: 11). Once again, the vantage point of the tabulator of coordinates is outside, and above, the coordinate plane under examination. Instead of rows and columns of desks in a classroom, we now have parcels of land divided into squares that form a coordinate grid extending beyond our field of vision. The aim is to determine the correct coordinates of different “objects” within the grid: a church, windpump, crossroads, and brickworks. The young student is trained to conceive of the rural landscape as an abstract space of coordinates within which “objects” can be located. In this manner, the landscape itself becomes a pedagogical device in the service of Cartesian epistemology.
If the countryside which is “laid out very tidily” is used to illustrate the importance of Cartesian coordinates, so too is the gridded cityscape (Figure 3.3). In this case, numbered streets and avenues laid out at right angles serve the same function as sequentially-numbered desks within a classroom or numbered property lines dividing farmland. In each case, the grid provides a frame of reference to locate “objects” within a rationalized space. In cityspace, a third dimension can even be added to the coordinate grid (Figure 3.4). This leads Cole and Beynon (1982 [1968]: 12) to the conclusion that “[c]oordinates are very important in geography and in mathematics. They help you to say accurately where things are.”

The grid also establishes a disciplinary order by producing a field of visibility, which enables the ordered “things” in their rows and columns to be inspected by an external gaze. This is clearly evident in the second volume of Cole and Beynon’s *New Ways in Geography* (1982 [1970]), in which the young reader is again encouraged to take up the positionality of the external observer—this time from a helicopter gazing down upon a group of soldiers arranged in a grid formation (Figure 3.5). “The soldiers are spaced evenly,” say Cole and Beynon (1982 [1970]: 6), “so that they look tidy and can easily be inspected.” The student is then asked to perform the following thought experiment: “In your exercise book make a map showing what the parade would look like to someone looking down from the helicopter” (Cole and Benyon, 1982 [1970]: 6). One could hardly ask for a more explicit demonstration of how Cartesian pedagogy naturalizes the external gaze.

In all of the examples described above—the classroom, countryside, cityscape, and military formation—the student is trained to perceive the world as a
Figure 3.3: The cityscape as coordinate system (Cole and Beynon, 1982 [1968])

Figure 3.4: Adding a z-axis to the urban coordinate grid (Cole and Beynon, 1982 [1968])
coordinate grid laid out for easy inspection. In each case, it is implied that this view is best attained \textit{at a distance or from directly above}. The same objective is sought in all of the exercises: to use coordinates in order “to say accurately where things are.” It is this process of spatial individualization which is the geographic basis of governmentality, as described in Chapter 2. If we concede that “government is the right disposition of things, arranged so as to lead to a convenient end,” then we can see here how the coordinate grid has been fundamental to establishing “the right disposition of things” through a spatial practice that conceptually reduces its objects to numerical ordered pairs of coordinates. This applies equally to students in a
classroom, farmhouses in the countryside, or apartment complexes in the inner city, although the “convenient ends” sought after may differ in each case.

Taken together, the exercises in *New Ways in Geography* can be seen as part of a deliberate pedagogical strategy to cultivate a Cartesian subjectivity through the repetitious performance of calculative thought (e.g., tabulating the proper coordinates in different contexts). We might call this practice the “formal inculcation” of Cartesian epistemology. If these exercises prepare students for more advanced mathematics, they also serve as a means of naturalizing and legitimizing the rationalized spaces that make up the “modern world.” By presenting the gridded world as a given, the politics of producing Cartesian space is thereby obscured. Instead, the grid is portrayed as a “tidy,” commonsensical way of ordering space.

The spaces of everyday life are thereby depicted as self-evident, transparent, orderly, and unambiguous—at least as seen at a distance or from directly above the coordinate plane. Yet, despite the pedagogical insistence on maintaining external objectivity, we must be careful not to conceive of the coordinate grid solely as an instrument of social control. Cole and Beynon may only provide perspectival views of an outside authority gazing into the grid, but we must not forget that those who literally *inhabit* the grid also make use of its serialized ordering. Some may even come to embrace the coordinate grid as “authoritative,” especially after being trained since early childhood that when “locating things in a room, in a town, [or] on a map,” it is most “convenient” to lay them out “tidily” in a grid pattern and to then search for the proper coordinates of the “things” which one seeks.
IV. Archaeological Excavations of Materialized Epistemic Space

The gridded classroom, countryside, and cityscape described in the previous section are classic examples of what I have elsewhere called “material replications” of the Cartesian coordinate system (Rose-Redwood, 2002). After such an epistemic space has been constructed, the epistemological framework upon which it is based can be said to “materialize.” Thought becomes materialized by constructing spaces within which an epistemology is literally inscribed (Latour, 1986; 1997 [1987]; 1999). The production of Cartesian epistemic space establishes a spatial regime of inscriptions, which consists of a coordinated “system” of numerical or alphabetical identifiers that have been physically marked into a given landscape. In both scientific practice and everyday life, the Cartesian spatial regime of inscriptions provides an epistemological foundation for an administrative rationality based upon the coordinate grid as a technology of government. To illustrate how the inscription process is central to the production of epistemic spaces (and the formation of administrative rationalities), this section examines the use of the Cartesian grid as an ordering device in the field of archaeology.

Over the course of the last century and a half, archaeologists have devised numerous excavation techniques based upon systematic recordkeeping practices. During the nineteenth century, archaeologist Pitt Rivers utilized the grid as an ordering scheme in archaeological excavation (Lucas, 2001), and W.M. Flinders Petrie’s 1904 publication of Methods & Aims in Archaeology provides an entire chapter on “Recording in the Field” using the technique of marking found objects.
with geo-coded serial numbers (Petrie, 1972 [1904]). One of the most widely known excavation strategies is Mortimer Wheeler’s “area-excavation” method, which divides the excavation site into a grid of square “boxes” separated by walkways known as “balks” (Figure 3.6). Wheeler’s excavation grid is a clear example of what I have been calling a materialized epistemic space, or a material replication of the Cartesian coordinate system. It is not so much the rectilinear geometry of the grid alone but the whole regime of coordinated inscriptions which makes Wheeler’s grid-boxes a Cartesian epistemic space.

In order to understand how Cartesian epistemic spaces enable the development of a particular form of administrative rationality, it is important to examine how such spaces are physically produced. As Wheeler (1954: 65) describes in *Archaeology from the Earth*, before digging occurs a datum must be established
and pegs should be “firmly driven into the ground” aligned in a grid formation. “The
squares thus pegged out,” Wheeler (1954: 66, emphasis added) notes:

are conveniently named by means of letters in one direction (say, east to west)
and by numbers in the other direction (say, north to south). They will thus be
known individually as A1, A2, A3, &c.; B1, B2, &c. The appropriate
designation must be painted clearly on the nearest face of each of the four
corner-peg, which for this purpose have been set diagonally in the ground.
Thus a peg set at the junction of four squares will have a different designation
on each face; e.g. A1, A2, B1, B2. The need for clear and abundant labelling
cannot be over-emphasized if error is to be eliminated from the records,
particularly on a large excavation.

It is through this mundane process of driving pegs “firmly” into the Earth in a grid
pattern and painting a pair of coordinates (A1, A2, B1, B2, etc.) onto such pegs that
Cartesian epistemic space is produced by means of inscription.

Once actual digging begins, a third dimension is added to the reference
system, as “the layers are demarcated and labelled with a serial number whilst the
excavation proceeds” (Wheeler, 1954: 67). The reason that Wheeler places such great
emphasis on the “need for clear and abundant labelling” is because this regime of
inscriptions serves as the basis of a geo-referenced recordkeeping system. If an
“object” is found, it is recorded in the archaeologist’s “field notebook” according to
its place within the coordinate grid. The system of inscriptions marked out across the
excavation site, once established, allows the archaeologist to transfer these
inscriptions into the notebook in such a manner that the inscriptions in the fieldbooks
“correspond” to the inscriptions on the ground. The correspondence theory of truth is
rightly out of favor in much contemporary philosophical theory (Rorty, 1979), yet the
very notion of “correspondence” takes on a whole new meaning when considering not
Figure 3.7: The archaeologist’s regime of inscriptions as a “correspondence” theory of truth (diagram by author)

a representation’s mirroring of reality but rather the correspondence of inscriptions “on the ground” with inscriptions in the fieldbook or on the map (Latour, 1999).

The inscriptions in the fieldbooks are worthless, however, unless there is some way of establishing a triangular correspondence: grid-fieldbook-object (Figure 3.7). The most obvious way to construct such a correspondence within the context of archaeological excavation is to mark the found objects themselves with the geo-coded inscriptions that match both the grid coordinates in situ and the fieldbook inscriptions. This is precisely what Wheeler recommends as the basic principle of “scientific” recordkeeping. In order to keep track of found objects, they are first placed in a box or tray, and a preliminary label is attached which includes “the code-name of the site, the number of the square or other sub-unit, and the number of the stratum” (Wheeler,
Wheeler insists that at some latter point the objects must then be cleaned and marked in a more permanent fashion. According to Wheeler (1954: 140, emphasis added), geo-coded serial numbers should be inscribed “either with Indian ink or white paint on the objects themselves or on labels tied firmly to them. Sooner or later, it is useful to cover the mark neatly with shellac as a protection.” We can see now how important the epistemic space of the Cartesian grid truly is to archaeological excavation: it gives rise to a self-referential regime of inscriptions that makes geo-coded recordkeeping possible.

What is it exactly though that makes the grid pattern so enticing to the archaeological excavator? Wheeler (1954: 64) argues that the benefits of the grid are obvious since it is “conveniently and clearly subdivisible for record and control . . . [and] capable of easy, progressive expansion in any direction without breaking down or impairing the preliminary datum-lines.” The Cartesian grid has also become a cultural signifier for modern scientific rationality in general, so it lends a measure of social authority to the archaeological endeavor as well. As noted in the previous section, Cole and Beynon portray the grid as a “tidy” way of ordering space. We should not be surprised, then, to find Wheeler praising the virtues of tidiness. “Without tidiness,” says Wheeler (1954: 149), “all is lost.” In fact, he equates tidiness with precision and advocates the practice of what he calls “Tidy excavation” (Wheeler, 1954: 149).

As a spatial virtue, tidiness went hand in hand with discipline as a social practice in the production of archaeological knowledge. Wheeler approached archaeological excavation almost as a military exercise, especially within the context
of his work in British India (Chadha, 2002). Wheeler (1954: 148) insists that when conducting an excavation “the basic factors of labour-control or, in the quaint terminology of the army, ‘Man-management’ are very much the same [throughout the British Empire].” The grid method that Wheeler devised not only formed the basis of a regime of inscriptions (as I have described above) but established the conditions for disciplining the diggers of the excavation site as well.

To illustrate the effectiveness of the grid as a disciplinary device, Wheeler juxtaposes two images of excavations “in the East” (Figure 3.8A and Figure 3.8B). The aim of this juxtaposition is to contrast “Chaos” with “Discipline” in the socio-spatial ordering of archaeological excavation. With reference to the first image (Figure 3.8A), Wheeler (1954: 62) comments: “Look at the crowded workmen, picking and shovelling tumultuously in all directions; the absence of a supervisor or indeed of any possibility of supervision.” Chaos, for Wheeler, is synonymous with untidiness and his first “axiom” of excavation is to banish untidiness. “It is an axiom,” he proclaims, “that an untidy excavation is a bad one, whether the untidiness reside in the general layout or in detailed execution. The guiding principles are not difficult: they are ‘Have a plan’, a carefully thought-out scheme, and execute it in orderly fashion” (Wheeler, 1954: 62). Wheeler insists that the plan, above all else, should be followed from start to finish. “Plan your work,” he continues, “. . . and methodically pursue your plan” (Wheeler, 1954: 62).

To remedy the chaos and confusion of an “untidy” plan, Wheeler provides an illustration of one of his own excavation sites, in which the grid supplies the basis of
Figure 3.8A and 3.8B: The archaeological grid, disciplinary power, and knowledge production (Wheeler, 1954)
such a “carefully thought-out scheme” (Figure 3.8B). He suggests that this mode of spatial ordering disciplines the entire enterprise:

It shows a site neatly parcelled out in readily controllable areas; small groups of workmen are directed by supervisors (distinguishable in the photograph by their sun-helmets); the basket-carriers are working in orderly procession along clear pathways; and in the middle distance on the right, the survey-party is conveniently at work at a table shaded by an essential umbrella (Wheeler, 1954: 62).

With supervisors each assigned a grid-square to keep watch over (as the “native” diggers do the hard manual labor), the ordering of space was directly implicated in maintaining the social hierarchy of knowledge production, which is “conveniently” symbolized by the “survey-party . . . at a table shaded by an essential umbrella.” As this example shows, the spatial ordering of “scientific” practice is inseparable from the social ordering of disciplinary power.

V. The Inhabited Grid and the Spatial Ordering of Everyday Life

Even for someone completely unacquainted with formal archaeological field procedures, the techniques described in the previous section will likely have a very familiar—almost commonsensical—ring to them. Why is this? For one, as we saw in Section II, children are taught from a very early age to conceive of space in Cartesian terms. To demonstrate the “practicality” of the Cartesian grid, the pedagogist points to the arrangement of desks in the classroom, or the sequentially-numbered streets in an American city. What is remarkable is that the world—pre-arranged into a “tidy” configuration—appears to actually confirm the “reality” of Cartesian epistemology.
If the archaeologist’s materialized epistemic space seems familiar (to an American audience in particular), it is because many cities and towns laid out since the eighteenth century are essentially archaeological excavations not of the dead but of the living. Just as an archaeologist inscribes a coordinate grid into the excavation site and then uses this regime of inscriptions as the spatial foundation of an administrative system of recordkeeping (of found cultural “objects”), so too does the city engineer inscribe a coordinate grid into the landscape to serve as the geographical basis of a governmental rationality (of people and property). Rather than digging downward into the depths of the underworld (and numbering strata layers along the way), the urban grid is built skyward (and the floors of buildings are sequentially numbered to establish a “proper” vertical axis of the urban coordinate system).

In this respect, Wheeler’s (1954: 64) characterization of the archaeological grid is equally appealing to the engineer, real estate developer, and government administrator. It is certainly not surprising, therefore, to find that the Cartesian grid has served as an ordering scheme for the capitalist commodification of the landscape, a device for rendering the world “legible” to the bureaucratic state, and a framework for the disciplinary ordering of space (Harvey, 1990; Scott, 1998; Pickles, 2004). It is not rectilinearity alone, however, that makes the grid so enticing to the technocratic producers of abstract space; more important is the spatial regime of inscriptions—and the corresponding administrative rationality—that the coordinate grid makes possible through the meticulous numbering of “every thing” within the grid. This reduction of quality to quantity, as Lefebvre (1991 [1974]) argues, is one of the defining characteristics of modern capitalist production in general and the production of
abstract space in particular. For many, the abstract space of the coordinate grid has become the taken-for-granted spatial order of everyday life. It is important, then, for theorists to critically analyze how the production of abstract space has shaped the everyday life of those who “inhabit” the grid.

I have argued in this chapter that Cartesian pedagogy privileges the gaze of an external authority, which might seem to support the theory of abstract space as a tool of social control. However, external authorities are not the only ones who make use of Cartesian epistemic spaces—so too do the inhabitants themselves (Hannah, 2000). In subsequent chapters, I will demonstrate that the practice of house numbering—more so than the grid itself—is fundamental to the production of abstract space. The administrative rationality made possible by house numbering is utilized within governmental bureaucracies as well as in the activities of everyday life (witness the ubiquitousness of “address books” in most homes in the United States as a way of “keeping track” of friends and family, for instance). The administrative rationality of such a spatial regime of inscriptions, in many cases, has become internalized by the inhabitants of abstract space.

House numbering systems have been indispensable to the formation of modern government even though they by no means eliminate all of the “secret places” within a city. House numbering is an example par excellence of the spatial ordering of surface appearances. Although it may serve as a façade of “order” that masks the conflicts and struggles that constitute a given space, the production of Cartesian epistemic spaces does not simply establish a regime of inscriptions that facilitates social control and repression. It also providing the very conditions of
possibility for the struggles of those who are “living inside the grid” (Cameron, 2003). In the next chapter, I explore the emergence of house numbering as a spatial regime of inscriptions that was one of the principal geographical foundations of modern governmentality.
4. INDEX TO THE CITY-TEXT:
THE HOUSE NUMBER AND CITY DIRECTORY AS TECHNOLOGIES OF GOVERNMENT

The neglect of the proper authorities, in not numbering the buildings, and placing at the corners the names of the streets, cannot be too seriously regretted. As it is, neither citizens, nor strangers, can find their way to any given locality, without serious inconvenience. The wonder is, not that a matter of so much importance should have been neglected so long, but that it should have been neglected at all. It will be well, if the compilation of this work, by exhibiting the evil, shall, with sufficient distinctness, indicate the necessity of an immediate remedy. Our Street Directory, compiled at considerable expense, will show the necessity of the improvement suggested.

— Cleveland City Directory (1856)

The public has cheerfully contributed the information essential to the completeness of this work. There are several classes, however, who have persistently refused the needed information. Among these are persons, for the omission of whose names it will be a sufficient apology to say, “They love darkness rather than light, because their deeds are evil, for every one that doeth evil hateth the light.” Other delinquents are respectable citizens, liable to jury duty, prefer obscurity, and the suspicion that is attached to it . . . . Sometimes the names of these parties have to be obtained by stratagem, at considerable expense and labor; and in a few instances, after receiving great annoyance, we fail to procure them.

— The Brooklyn City Directory (1860)

I. Introduction

In many cities and towns throughout the world today, the numbering of houses and other buildings has become such a commonplace practice of local government that its everydayness makes it hard for urban inhabitants to even imagine living without these numerical inscriptions that make up the abstract spaces of
everyday urban life. Yet, as a spatial practice, house numbering is a comparatively recent innovation, which did not become widespread until the second half of the eighteenth century, and in some cities the practice was not systematically adopted until well into the nineteenth century. One of the earliest recorded cases of the numbering of houses occurred in Paris on the Pont Notre Dame in 1463 (Pronteau, 1966; Miles, 1972; Papayanis, 2004). It was not until 1779, however, that a concerted effort was made to number the houses of Paris (Pronteau, 1966). Contrary to what many might expect, the governmental authorities were not the chief instigators of this numbering project. Rather, it was the publisher of a Parisian city guide and directory, Marin Kreenfelt, who took it upon himself to hire a team of men to paint numbers upon houses along the Parisian streets, in some cases without the consent of the owners of property. Kreenfelt’s plan to number houses in Paris met with considerable resistance from one of the magistrates of the Paris Parlement, François-Louis Joly de Fleury, who swiftly ordered the Lieutenant General of Police to put an end to Kreenfelt’s scheme to construct a rationalized urban space. Despite such initial protests, it was not long before the governing authorities turned a more favorable eye to the practice of house numbering, and most houses in Paris had been numbered by the start of the French Revolution (Garrioch, 2002).

One might at first suppose that other French cities and towns then followed Paris’ lead in adopting the use of house numbers, yet it turns out that smaller towns in France had begun numbering houses prior to their widespread adoption in Paris. Over a decade before Kreenfelt attempted to number the houses of Paris without official authorization, a decree prescribed by Louis XV on March 1, 1768, declared that all
cities and towns in the kingdom—with the exception of Paris—were required to affix numbers to houses in their jurisdiction, largely for military purposes (Pronteau, 1966). It was a common, albeit unpopular, practice during this period for soldiers to be housed in civilian quarters with individual families in the various towns across France. The chief aim of the 1768 decree was to make it easier to keep track of troops when they were dispersed throughout a given city or town. Being the center of royal power, Paris was exempt from the rule because soldiers lived in official barracks rather than among civilians.

Other cities in Europe also began numbering houses during the second half of the eighteenth century. There is some evidence of numbered houses along several streets in London as early as 1708, yet it was only after the Court of Common Council passed a law in 1765 that the city was officially required to place street signs at the corners of each intersection and to number individual houses (Goss, 1932). One year earlier, the Post Office had extended home delivery beyond the London city limits, and the further expansion of postal services during the nineteenth century contributed to the growing use of house numbers in cities throughout England (Miles, 1972; Joyce, 2003). Houses in the city of Berlin were first numbered in 1797, the numbering of houses was introduced in Vienna in 1806, and Florence adopted the practice in 1808 (Lynch, 1960; Azaryahu, 1996).

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25 At the end of the nineteenth and beginning of the twentieth centuries, there was a flurry of newspaper articles published on the subject of house numbering (e.g., “Centennial of the House Number,” 1895; “The Numbering of Houses,” 1898; “The Numbering of London Houses: Were the Jews Responsible?,” 1898; “First House Numbers: Custom Began More Than Four Hundred Years Ago,” 1913; “House Numbering: Originated Four Hundred Years Ago in France,” 1913). These celebrations of the house number illustrate the extent to which house numbering had become an established practice in the United States by the turn of the twentieth century.
Prior to the use of house numbers, European cities relied chiefly on signboards, or hanging signs, which were erected by shopkeepers to attract customers (Garrioch, 1994). Many eighteenth-century commentators viewed such signboards as a dangerous nuisance, and with good reason. In 1718, a large shop sign on Bride Lane in London fell and killed four people (Heal, 1947). Paris was one of the first cities to ban such hanging signs (in 1761), with London and Westminster following suit in 1762 and 1763, respectively (Heal, 1947). As the old custom of hanging sign boards upon buildings came under fire, the numbering of houses was seen as an indispensable means of ordering urban space.

So taken-for-granted has the house number become that few geographers, historians, or other scholars have examined the spatial history of house numbering from a critical perspective. This is particularly surprising given the recent interest in understanding the intersecting “axes” of knowledge, power, and the production of space. The emergence of house numbering as a spatial practice cannot solely been attributed to a single factor. Rather, there were multiple forces at work. On the one hand, centralized military control is a key element in explaining the rise of house numbering in France (with the exception of Paris). Equally important was the use of house numbers for civil administration in urban centers. The practice of administratively affixing individuals to specific numerical addresses enabled the government to more easily tax its population, facilitated the conducting of a national census, and also served as the administrative basis for the commodification of space (Scott, 1998).
As the case of Paris illustrates, the emergence of house numbering cannot solely be attributed to the increasing power of the state. In many instances it was the business community, especially the publishers of city and business directories, that first recommended house numbering as a way of rationalizing urban space in order to serve the ends of commodity exchange. Not only was the numbering of houses, as well as parcels of land, crucial to the formation of a standardized real estate market, this chapter illustrates that it was also seen as a crucial way of “economizing time” by reducing the amount of time spent searching for the business or residence one sought to find, thereby ideally speeding up the rate of the circulation of capital.

The aim of this chapter is not to provide a comprehensive account of the global history of house numbering. Such a project is much needed but beyond the scope of this study.26 In the current chapter, I provide a preliminary and selective exploration of the early history of urban house numbering in the United States. As with Europe, it was not until the latter part of the eighteenth century that house numbering became a common practice in the U.S. On an empirical level, this chapter seeks to determine how the practice of urban house numbering was related to the publication of city directories during the eighteenth and nineteenth centuries. In terms of its theoretical contribution to contemporary geographical debates, the present chapter brings together the insights of the governmentality literature with Marxian analyses and critiques of the commodification of space and time. I do not seek to provide a chronological narrative of the diffusion of house numbers from a central “origin.” The story is much more messy than such a linear narrative would suggest.

26 Although it is beyond the limited scope of the present study, what is needed is a comparative examination of the historical geography of house numbering in the various world regions, especially within the repressive context of European colonialism and U.S. imperialism.
Rather, I have chosen to follow a thematic approach to examining the relation between house numbering and geographic knowledge production as spatial practices of rationalizing the landscape.

Section II explores the simultaneous emergence of house numbering and city directories as “technologies of government” within the context of a growing capitalist urban network. I illustrate the crucial role that city directory publishers played in the adoption of house numbers in many U.S. cities and towns during the nineteenth century. In most cases, city directories were published by private entrepreneurs rather than by city or state governments. In Section III, I describe how city directory publishers obtained financial support from members of the business community and illustrate that not all businessmen enthusiastically supported such enterprises. I then explain how the editors of city directories attacked non-subscribing businessmen by using the directory as a “mirror” of liberality and enlightenment.

Next, I explore how the question of perfection—or rather imperfection—arose and how city directory editors attempted to conceptually contain this “problem.” The editors of city directories often noted the rapid demographic and economic changes occurring in nineteenth-century American cities, and they sought to bring conceptual “order” to the presumed “chaos” of continually changing circumstances in everyday urban life. This process, however, was riddled with contradictions. On the one hand, they lauded the rapid increase in population and trade as evidence of “progress,” yet the sheer rapidity of such changes was also antithetical to the capitalist demand for fixity and administrative order (Harvey, 1996; 1999 [1982]). I critically analyze the techniques of knowledge production utilized by city directory enterprises to collect,
organize, and present an assortment of alphabetized “facts” to the public (with house numbering greatly enhancing the utility of a city directory).

The process of collecting names, addresses, and occupations from each household and business in the city did not take place without considerable resistance and contestation. Section IV considers the various ways in which urban inhabitants attempted to subvert what essentially amounted to a profit-driven, privately financed annual census of the urban population supported principally by the business community. Section V then closes by discussing how the foregoing analysis confirms the usefulness of bringing together the insights of governmentality studies and Marxian geography to explore the contradictory nature of governmental knowledge production and the ordering of urban space.

II. “An Index to the Great Ledger of the Community” and “the Soul of Commercial Transactions”

In contrast to the experience of France, there was no decree from Washington that required all U.S. cities and towns to number their houses. Instead, the practice of house numbering was not universally adopted all at once but rather occurred in a piecemeal fashion. As in Paris, however, the early proponents of house numbering in the United States were the editors and publishers of city and business directories. The city of London is generally credited with having published the first city directory in 1677. Another directory of that city was not published for nearly another two decades, and it was only during the eighteenth century that city directories were annually published in London. Philadelphia was the first American city to publish a
city directory on November 16, 1785, and less than three months later New York followed Philadelphia’s lead (Goss, 1932; Norton, 1950; Burton, 1956; Spear, 1961; City Directories of the United States, 1983; Atkins, 1990).

By the end of the eighteenth century, four other U.S. cities—Boston (1789), Charleston (1790), Baltimore (1796), and Hartford (1799)—had published city directories, and the number of cities publishing city directories for the first time continued to rise until it eventually peaked in the 1850s and fell precipitously with the onset of the Civil War in 1861 (Figure 4.1). The same overall pattern is evident when examining the total number of city directories published in a given year (Figure 4.2). The total number peaked in 1859 at over 90 and then fell below 30 in 1862. The number of directories published finally stabilized after the war, and remained between 60 and 70 each year from the 1870s until the end of the nineteenth century.

Many of the early directory publishers were either real estate brokers or book publishers, and, as Burton (1956: 6) points out, “[i]t is not until about the 1840’s that

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27 The data on city directory publications for Figure 4.1, Figure 4.2, and Figure 4.3 were compiled from the bibliographic reference, City Directories of the United States (1983). Population figures for Figure 4.3 were taken from the federal censuses of each city.

28 The precise reason why the number of directories published during this period never reach pre-war levels remains an open question requiring further archival research beyond the scope of this study. One potential factor was that the government itself began to take a much larger role in knowledge gathering activities at this time. Another possible explanation may entail the lack of profitability of the city directory business in general, which inhibited the annual publication of a city directory in some American towns. A potentially useful way in which to explore this issue is to consider regional patterns in the discontinuation of the publication of city directories after the Civil War. By my count (drawing on the data source cited in the previous footnote), approximately 61% of all cities that published a city directory prior to the Civil War discontinued their publication after the war and throughout the remainder of the nineteenth century. Although somewhat anachronistic, if we use today’s regional categories of the United States, the majority of those cities and towns that discontinued publication were in the Northeast (51%) and Midwest (38%), while much fewer were in the South (8.5%) and West (2.5%). If we consider each region separately, a number of striking patterns emerge. In both the Northeast and Midwest, only 33% of the cities and towns in each region that had published a directory continued to do so after the war. By contrast, 58% of cities and towns that had already published a city directory in the South and 73% in the West continued publishing directories. While the total number of directories published during the nineteenth century was highest in the Northeast (with the second highest in the Midwest), the retention rates were higher in the West and South.
Figure 4.1: The number of U.S. cities publishing a city directory for the first time per year (created by author)

Figure 4.2: The total number of U.S. cities publishing a city directory per year (created by author)
publishers handling nothing but directories began to make an appearance.” In some instances, those publishing a city directory had previously been employed by the government to conduct a census or to number houses and then decided to compile a directory with the information that they had collected (Directory for the District of Charleston, 1809; Directory of Jersey City, 1855; Ten Eyck’s Washington and Georgetown Directory, 1855; Clinton Almanac and Directory, 1856). While there were exceptions, the city directory business was generally not a very profitable industry, relying chiefly on subscriptions and advertising. When the editors of city directories began compiling “data” on the names, occupations, and locations of businesses and private residences in a given city, they soon realized that it would make their job a lot easier if the houses were numbered in some systematic fashion.

The editor of the first Philadelphia city directory of 1785, Captain John Macpherson, devised his own house numbering scheme after unsuccessfully attempting to convince the City Council to number all the houses in the city. “To make this Work as useful as possible,” he noted:

> the Editor has numbered all the stables and other out houses, likewise the number of houses that probably will be built upon the unimproved lots within the boundaries before described; by which means, wherever a house is built hereafter, its number may be easily ascertained by attending to the Editor’s method of numbering, which is following the course of the sun from wherever the numbers commence (MacPherson’s Directory, 1785).

Not only were existing built structures to be numbered, but future development was taken into account by “the Editor’s method of numbering.” Macpherson adopted the English practice of consecutively numbering houses along one side of the street and then proceeding down the other side continuing the same numerical sequence. This same practice was also used in other American cities, such as New York (Isaacs,
1940). The English method was quickly deemed inadequate, however, since it resulted in the juxtaposition of high and low house numbers directly across from each other at the same section of a given street.

During the 1790s, the practice of placing odd and even numbers along opposite sides of the street became common. The U.S. Marshal who conducted the first federal census in Philadelphia (1790), Clement Biddle, renumbered the city’s houses and separated odd and even numbers on different sides of the street. Interestingly, Biddle (1791) then published his own city directory based upon this new numbering scheme. Biddle’s plan, however, had its own problems. As Alotta (1990: 119) explains, “[i]f a vacant lot existed, Biddle skipped it and numbered the next house,” which led to various difficulties as new houses were built in between the houses that had already been numbered. In Chapter 5, I will discuss how such technical problems were resolved (and rationalized) through the construction of what came to be known as the “Philadelphia System” (with one hundred numbers per block) as well as other systems of constructing a “theoretical” space of equal intervals.

Before the publication of the first city directory in Norfolk, Virginia, the publisher Charles H. Simmons successfully petitioned the local authorities to allow him to number the houses and designate official street names in the city. The official government statement, issued prior to the publication of the directory, stated that “he [i.e., Simmons] is about to compile and publish a Directory, in which he proposes to designate the places of abode of the inhabitants of this borough, and solicits the countenance and patronage of the court, setting forth that it would greatly aid and
facilitate the undertaking by being duly authorised to number the buildings” (Simmon’s Norfolk Directory, 1801). In this instance, the government did authorize Simmons in his “undertaking,” yet this was not always the case in other cities.

The editors of one of the early city directories of Springfield, Illinois, for instance, were less fortunate. Similar to Simmons, they petitioned the City Council to number the city’s houses and put up street signs. Their proposal, however, was not well received. As the editors put it, “our worthy City Fathers, for some reason or other, did not favorably entertain our proposition” (Bessey’s Springfield Directory, 1857). When the publisher of the Detroit city directory called on the City Council of Detroit for the authority to number houses in the city, the Council subsequently passed a house numbering ordinance but did not give him the authority to carry it out (Directory of the City of Detroit, 1846). In a good number of American cities, the “proposition” to begin numbering houses was often initially posed by the editors of city directories, and the governing authorities were not always immediately receptive to their requests.

Throughout the nineteenth century, city directory editors across the United States constantly complained that the local authorities had failed to properly number houses in their cities. It was often viewed as “a great disadvantage and embarrassment to us, so that it has rendered it impossible to give a minute direction to some of the residences” (Bridgeport and East Bridgeport Directory, 1858). It was not uncommon for the publishers of city directories to decry “[t]he neglect of the proper authorities, in not numbering the buildings” (Cleveland City Directory, 1856). This claim was made well into the nineteenth century in many U.S. cities and towns.
Sometimes city directory publishers—in a move similar to Kreenfelt in Paris—took it upon themselves to number the buildings without getting an official stamp of approval from the city government. This is precisely what happened in Mobile, Alabama, in the late 1830s. When the first city directory of Mobile was published in 1837, none of the houses had been numbered. Prior to the publication of the second directory in 1838, its publisher “presented the city council with a petition of some seven or eight hundred names, principally property holders and business men, praying that honourable board to number the houses, which was rejected” (Mobile Directory or Strangers’ Guide, 1839). The publisher then proceeded to number the houses “at his own expense,” hoping that he would make up the cost with the sale of his directories. One year later, the same publisher considered numbering the houses again but became discouraged when he found that many of the numbers that he had placed upon houses the previous year had either been “torn down, or painted over” (Mobile Directory or Strangers’ Guide, 1839). He was not willing to re-number the houses each year “at his own expense” and noted that “some measures, either by the council or property holders should be taken to secure their permanency” (Mobile Directory or Strangers’ Guide, 1839).

The passage of a house numbering ordinance, however, was not enough. The production of rationalized space required continuous maintenance in order to establish “permanency.” For example, the Detroit city directory of 1855 called on the city to appoint a “competent person” who would be authorized to enforce the city’s house numbering regulations, implying that they had not already done so (The Detroit City Directory, 1855). Even in smaller towns, such as Dover, New Hampshire, city
directory editors complained that visitors and those “engaged in business” were constantly “subjected to perplexity” due to the lack of proper street signage and house numbering (The Dover Directory, 1830).

The majority of cities first published a directory at some point before their population surpassed 10,000 inhabitants, and there were at least forty-four cities and towns that published their first directory with a population of less than 5,000, nine of which published a directory before their population reached 2,000 (Figure 4.3). City directories, therefore, were not only a product of large cities, but smaller towns as well. The editors of city directories often asserted that large population size “demanded” the publication of a city directory, yet as the data above show, sheer population size alone did not account for the growth of city directory enterprises.

Figure 4.3: The population size of cities publishing their first city directory (created by author)
The introduction of the city directory into American urban life went hand in hand with the emergence of house numbering as a spatial practice in eighteenth- and nineteenth-century America. Urban space was often compared to a gigantic recordkeeping book, and house numbering was seen as offering a means of constructing what we might call the “physical typography of the landscape.” Just as a book needs page numbers, the argument went, so a cityscape needs serialized house numbers. Likewise, if a book needs an index of names and subjects, so too does a city-text need what one city directory editor referred to as “an index to the great ledger of the community” (*The Beloit Directory*, 1858). This was precisely what city directories claimed to provide to the subscribing public. The editors of such publications viewed the directory as “a faithful index of the city” (*Boston Directory*, 1855) and hoped that it would eventually become a standard “index of reference, and be as familiar as ‘household words’” (*Boyd’s Philadelphia City Business Directory*, 1858).

Not only was the city directory to serve as an index in a functional sense, it was also seen as a trustworthy “index to the growth and prosperity of a city” (*The Charlestown Directory*, 1852). In other words, its publishers viewed the city directory as an index of “progress,” both in demographic and economic terms. According to one directory editor, the organized contents of a city or business directory offered “a sure and reliable index to the character and resources of the places spoken of” (*Finning’s Bridgeport Town and City Directory*, 1855). The city directory was where one looked when in need of acquiring “facts” concerning the city. As another directory editor put it, “a publication of this order, allow[s] no scope for the play of
the imagination, being a simple exponent of facts” (Boyd, 1857). In their attempt to bring “order out of confusion” (Louisville City Directory and Business Mirror, 1858), city directory publishers insisted that “a Directory should deal with unambiguous facts” (Geer’s Hartford City Directory, 1860).

Although some directories welcomed “reasonable” criticism, in at least one case it was noted that “the publisher assures the public that he derived all his facts from authorities whose truth and accuracy are not to be questioned” (Sacramento Directory and Gazetteer, 1857, emphasis added). Another commented, “I have often been asked, ‘Where do you get those facts?’ I cannot give you the details, but it is enough that you have them, so that they may be transmitted to posterity” (Drown’s Record and Historical View of Peoria, 1850). Directories, in short, were in the business of producing authoritative “facts” that were “not to be questioned,” which would provide a record of urban life not only for contemporaries but also for posterity as a means of shaping the future interpretation of the geographies of the past.

Once collected and compiled, these “unambiguous facts” could then “essentially aid the man of business, the capitalist and the stranger in their pursuits, and place before each, at a glance, much useful information” (A Directory for the City of Buffalo, 1837). During the first half of the nineteenth century, it was seen as crucial that the directory be comparatively small in size, “it being the desire of many, that it should be of a size that might be carried in the pocket” (The Philadelphia Directory, 1802). Why was this so? “The light and portable size,” suggested the editor of the 1838 Philadelphia directory:

and the serviceable order of this book render it at once a convenient and intelligent pocket companion for the stranger, merchant, or business man in
Philadelphia, by affording him a ready and desirable guide . . . . promptly
directing him where to obtain the various goods which comprise his required
assortment of merchandize, with as little delay as possible; thereby
economising time, and expediting his general business transactions
(O’Brien’s Wholesale Business Intelligencer and Southern and Western
Merchants’ Pocket Directory, 1838, emphasis added).

By minimizing delays in obtaining commodities or pursuing one’s desired
destination, the city or business directory—and the city’s corresponding house
numbers—resulted in the “economising” of time through the production of urban
space as a city-text, fully equipped with “page numbers” and a bonafide alphabetical
“index.”

It was equally necessary, or at least so it was argued by the editors of city
directories, that the whole and its parts should be accessible “at a glance” to the
public. In short, the directory sought to totalize and individualize at one and the same
time. These dual strategies were deemed essential:

in larger communities where the members are many—where the diversity of
interest, pursuits and of property, is disconnected and great—where the sphere
of the whole is extensive and grand, but the space of the several parts
contracted and small, it becomes highly important to commerce at large, that
the place and the business of each individual should be easily known.
Intelligent experience will suggest the value of time, in the conduct of
prosperous affairs. Its economy in business is the source of all wealth.
Punctuality is the life—the soul of commercial transactions. None are above
its demands however exalted or proud—none so humble and low but may
serve its request. To assist the citizen and the stranger in the proper use of his
labor and time in the pursuit of his interest, is the purpose of our Directory
(Daughdrill & Walker’s General Directory for the City and County of Mobile,
1856).

The rationalization of space via house numbering, in a very real sense, was chiefly a
way in which to improve “the value of time”—with punctuality serving as the “soul”
of the circulation of capital.
The publication of a city directory, as with many other products of what Anderson (1991 [1983]) calls “print-capitalism,” had material consequences. “We live in an age of progress,” remarked the editor of the 1853 Nashville directory, “[a]nd in nothing is it more distinctly marked than its facilities for imparting knowledge through the Printing Press. This mighty enginry exerts a most controlled influence upon the political, literary, moral and commercial interests of the world” (The Nashville, 1853). It was for this reason, he continued, that “much responsibility attaches to the making of books” (The Nashville, 1853). As noted above, the city directory was both a “technology of government” as well as an “instrument of commerce” (Norton, 1950), a mechanism of both individualization and totalization. The latter requires a brief explanation. Not only did the city directory include the name, address, and occupation of heads of households and businesses (i.e., individualization), it also included aggregate data from the census as well as simply adding up the total number of entries in the directory for a given year and comparing that total figure with previous years (i.e., comparative totalization), whereby increasing population was seen as a sign of material “progress.” The publication of a city directory during the eighteenth and nineteenth centuries most often led a city to number its houses—if it had not already done so—thereby initiating the production of abstract space and the economization of time.

III. City Directories, Knowledge Production, and the Construction of the Public Sphere

As an index to the geo-coded city-text, city directories contained a miscellaneous assortment of information, including names, addresses, and
occupations of certain classes of individuals (e.g., heads of households, widows, white males over 21 years of age, and in some cases a separate section for “colored people” listed, unsurprisingly, at the back of the book).\textsuperscript{29} Most directories also included a preface, a section on the local history of the city, as well as lists of postal rates, members of various governmental and non-governmental organizations, and the like. Much of the latter information was either offered directly from the organizations themselves or obtained from the public record. Some directories contained a street index and a map in addition to the standard list of residents alphabetized by name.

Although some directory compilers utilized tax assessment records to produce their directories, the majority of publishers hired a team of men to “canvass” the city door-to-door, or did so themselves. In short, they conducted a privately-financed census of the city (often on an annual or semi-annual basis), and such an endeavor was largely funded by the business community (through advertisements and subscriptions). As noted in the previous section, the directory business was, in many instances, not very profitable, principally because not all businesses chose to offer their patronage. In directory after directory, from New York to Cincinnati, the publishers seemed to almost take pleasure in ranting on about how certain members of the business community borrowed directories from their neighbors instead of buying their own copies.

The St. Louis directory of 1851 is a representative, if extreme, example of such a rant against borrowing. The publisher politely noted that he sought:

\textit{to stump and bluff off all the leeches, vampires, and other blood-suckers and sponges in the city, who are wont to withhold their patronage on account of the trivial expense, by compelling a refusal on their part. I know so many of...}

\textsuperscript{29} Some directories included “coloreds” in the main body of the text, distinguished by an asterisk (*).
these, who are as much in the habit of referring to Directories as the actual patrons themselves, that I have the best of reason for believing that they all do it . . . . Now, all this is a gross fraud perpetrated upon the publisher . . . . By such means the publisher is deprived of a just reward for his labors, and a remuneration for his actual expenses. Such practice is immensely more disreputable than procuring money under false pretenses—no more honorable than veritable pigeon-dropping.

But still, it will not do to leave the names of such live-lumber out of a Directory. Every such, in the course of the year may be enquired for by an actual gentleman; therefore, to leave such out, would be the rendering of a Directory but partial and defective (Green’s St. Louis Directory, 1851).

A number of points are worth raising here. First, it is clear that not all businessmen in a given city financially supported their local city directory, so one needs to be cautious while making generalizations about the “business community” as such when it comes to the publication of a city directory. Second, in most cases, even those who did not subscribe to a directory were included in its pages.

One way to reward subscribers, and thus distinguish them from the “leeches, vampires, and other blood-suckers” who did not subscribe, was to list subscribers’ names in capital letters. In this way, the directory would become a “mirror” not only depicting the social and geographical circumstances of each head of household in a city but would also reflect the “liberality” of those businessmen who supported the publication of the directory. The analogy of the mirror resonated among the editors of a number of city directories. As one publisher commented:

we have now given the work an additional name, “Mirror.” A mirror is to reflect. We mean that ours shall reflect. It shall be so arranged as to reflect the liberality or rather the justice of those who are willing to, and do pay for the benefits they, themselves and the city generally derive from the work; and it shall more clearly reflect the meanness of those who are willing to share in common, with others, its benefits, without paying one cent towards its support. We wish those who purloin the benefit of our labors, to see themselves. Let them read this, and our word for it, they will then, whenever they refer to the work, see THIEF upon every page—others who do not carry
the mark upon their forehead, will not find it there (Williams’ Cincinnati Directory, 1853).

Several years later, the same publisher took the mirror analogy a step further by categorically refusing to include the name of any one who did not subscribe to the directory. “The principal characteristic of a mirror is its reflecting power,” argued the publisher of the 1856 directory of Columbus, Ohio:

—yet it has no power to reflect the image of those who are too indolent to place themselves in a proper position, neither does, nor should, our mirror, reflect the business of such as do not take the proper steps by furnishing the means for enlarging and burnishing the material, consequently the names of subscribers only are inserted (Williams’ Columbus Directory, 1856).

Those who did not subscribe were seen, in a way, as not paying their dues for a “public good,” and were thus deemed unworthy of mention in the directory.

City directories and the related practice of house numbering, so it was claimed, benefited a city’s business community at large. Free copies of city directories were commonly placed in public spaces, such as post offices, hotels, railroad depots, libraries, banks, and on steamships, thereby drawing attention to a city from those at a distance. Local boosterism was often framed within a discourse of national and imperial progress. “Let capitalists at a distance be . . . informed,” asserted the Detroit city directory of 1853, “that . . . [t]he field of labor is . . . open to the capitalist . . . confederated under the banner of the Stars and Stripes, constituting the great empire republic of North America, which is destined to arbitrate, if not to dictate, a rational code of popular liberty to the decaying Monarchies of THE WORLD” (Johnston’s Detroit Directory, 1853). Especially in Western cities and towns, directories were often tailored “to induce capitalists [on the Eastern seaboard] to make investments here in works of public and private improvement” (Norris’
Business Directory and Statistics of the City of Chicago, 1846). Although a city directory was most often produced for a local market, it was also a medium through which a city could boast its achievements to the nation and project its future greatness in order to encourage capital investment.

The “public” depicted in the pages of a city directory was of a highly selective description. It was often confined to white, male heads of households from the so-called “better” portions of a city (Burton, 1956: 6). The information in a directory was aimed at “the enlightened men of America” who demonstrated their liberal sensibilities through an enlightened interest in “the subject of statistics” (Census of the City of Savannah ... to which is added a Commercial Directory, 1848). It is worth spending some time critically examining how exactly such knowledge was produced and what claims were made concerning its accuracy.

The gendered dimensions of directory publishing are worth considering with respect to both the content of the directory as well as the knowledge gathering strategies of the directory canvassers. Women, domestic servants, and children—that is, the legal “dependents” of the “head of household”—were generally excluded from the directory, which was not a mere oversight on the part of city directory publishers. Rather, the directory can be seen as part and parcel of an attempt to naturalize and legitimate patriarchal family relations then codified by the American legal system as a form of what historian Carole Shammas (2002) calls “household government” (also, see Basch, 1982; Wortman, 1985; Salmon, 1986; Hall, 1987; Maschke, 1997). Although not explicitly discussed by Shammas or other feminist historians, the practice of house numbering was, at least in part, a strategy of pinpointing the
“household” as a site of government, with the male head of household then serving as the representative of the familial unit to the public at large, as depicted in the city directory. Yet, as Shammas (2002) points out, the mid-nineteenth century was also a period in which the authority of the male head of household was increasingly under attack, which may explain the perceived urgency among city directory publishers (themselves male heads of households) to represent all but the head of household as not “qualified” to provide legitimate knowledge of the family.

However, although servants, women, and children were generally excluded from the city directory (and thereby conceptually relegated to the “private” sphere), they were, ironically, the main sources of the information that filled its pages. It was rare for a directory canvasser to actually acquire information directly from the “head” of each household when going door-to-door. Most of the information was obtained from servants, as well as the wives and children, of the familial patriarchs. While the compilers of directories relied on these groups for information, they cautioned their subscribers that this was a potential source of error. They criticized the “contradictory and vague information” that was provided by “females, servants, [and] children” (Matchett’s Baltimore Director, 1851) and blamed many of the errors on the fact that the information was given “by some member of the family not entirely qualified” (Bridgeport and East Bridgeport Directory, 1858). “The head of the family cannot always be at home,” noted the Baltimore city directory of 1856, “and we must take the required information from illiterate servants or children” (Woods’ Baltimore Directory, 1856). Another publisher of a city directory explained that “[j]in almost

30 The historical emergence of the gendered separation between the “public” and “private” spheres has been the subject of considerably feminist critique. For a useful introduction to such debates, see Landes (1998).
every instance, at private dwellings, the only source through which this information is obtained being from domestics in attendance at the time” (*McElroy’s Philadelphia City Directory*, 1861). The role that house numbering and city directory publishing played in nineteenth-century gender politics and the government of the “household” requires further research, yet the present chapter demonstrates that the rationalization of urban space was intimately bound up in the micropolitics of consolidating the power of the household head.

In the next section, I shall discuss the question of resistance to knowledge production more directly, but for now let us consider the question of error and the imperfection of the city directory as a technology of government. The editors of city directories did not claim that their works were perfect. Quite the opposite. They continually remarked that “it is impossible but that errors will creep in” (*The Philadelphia Directory*, 1811). The very thought that a directory could be perfect was deemed unreasonable. “If any persons are so unreasonable and exacting as to expect absolute perfection in a work of this nature,” maintained one directory publisher, “... let them reflect upon the chaos of names that must be reduced to order, classified and alphabetically arranged” (*Directory for 1856/57 of Pittsburgh and Allegheny cities*, 1856). First of all, given the transient nature of much of the population, they argued, a city directory was obsolete the moment that it was published (which was largely why an annual or even semi-annual publication was deemed necessary). Secondly, in cities with large immigrant populations, canvassers found it quite difficult to obtain the names of this segment of the population, except in cases where canvassers were hired who spoke various languages (as was the case in Chicago and Milwaukee). Thirdly,
the spelling of names, or orthography, posed a significant problem in a city directory. Given such difficulties, it is not surprising that one directory publisher referred to his product as a “Book of Errors” (The Albany Directory, 1829), which he maintained was nevertheless useful to the commercial success of the city.

IV. Strategies of Urban Knowledge Production and the Tactics of Resistance

The publishers of city directories saw themselves as offering a public good that benefited the entire community. They were quite perplexed, then, to find that a significant number of inhabitants commonly refused to give the requested information or attempted to provide “false” responses to the inquisitive canvassers. “In some instances,” explained the Memphis city directory of 1855, “the persons applied to were improperly reluctant in giving their names and places of business, seeming to think it an evidence of smartness to annoy the canvasser, others were too busy to attend to the matter” (W.H. Rainey & Co.’s Memphis City Directory, 1855). The directory canvasser was commonly taken to be an agent of the government, such as a tax assessor, a census taker, or a military drafter. “Sometimes people would refuse to give their names,” noted one directory, “fearing it would cause them to be taxed, or stand a draft in the militia, or for the jury. Some would not give their full christian names, and many gave names without a residence” (Mobile Directory, 1855). The linking of name and residence could serve various governmental purposes, and not all urban inhabitants wished to voluntarily offer such information.
Some would go to great lengths to obstruct the directory canvassers. “We have known wives to forget that they had husbands,” exclaimed a directory editor, “sisters to forget that they had brothers, &c., &c., especially when they supposed that a tax bill or a notification to do military duty might be in the offing!” (Beckett, 1850). This led one directory editor to respond by remarking that “[w]e advise every man to let his wife know his business, and learn her how to spell his name” (Williams’ Cincinnati Directory, 1849). Women themselves were only deemed worthy of entry into a city directory if they had been widowed and were thus “heads of households.”

Although it was generally asserted that the canvassers hired were trustworthy, impartial, and respectable, they appear to have offended certain members of the community in some cities. In one such instance, the editor of the Indianapolis directory of 1855 confessed that:

Because we happened to inform some lady that she was mistaken with regard to the nature of her husband’s office, we were called on by her husband, and threatened to have a “dornic pounced off of our devoted head,” an operation which we by no means relished, and tried to pacify the gentleman but could not, and had to allow him to go at large, breathing vengeance on us if we ever did so again. Such cases, we are happy to state, are few or we would not doubt, long ere this, have been on an exploring expedition among the stars, or buried in oblivion, and covered deep by the anathema maranathas of persons made furious by such mistaken grievances (Grooms & Smith’s Indianapolis Directory, 1855).

This may be an extreme example, but more subtle forms of resistance to the canvassing of names were commonplace and illustrate the micro-politics of individualization in nineteenth-century American cities.

Those who refused to cooperate were depicted as being “ignorant” and “unreasonable.” How, it was argued, could any respectable citizen not see the benefit provided by an accurate directory of a city? Yet, there appeared to be no “reasoning”
with those who made “unreasonable remarks” (Matchett’s Baltimore Director, 1842).

As one directory editor explained:

“But,” says one, “will not every person gladly furnish such information for a work so useful?“ To such enquirer we will only say, let them make the experiment. In hundreds of instances it is found very difficult to obtain the information wanted; and in many cases the applicant has the door rudely shut upon him before he can ascertain the names of such of the family as should be inserted. What is he to do in this case? He is not, like those employed to take the census, clothed with any power by which he can compel these churlish persons to furnish the desired information. He must therefore seek it from other sources, or fail in obtaining it (The Providence Directory, 1841).

The only way to explain such resistance, or so it was argued, was to assume that there must be some “misconception of the intention of the publisher” (The Providence Directory, 1841). Why else would someone go out of their way to refuse to offer the requested information?

Quite revealing is the directory editor’s comment in the quotation just mentioned, which contrasted his project to that of the government census taker by acknowledging that he had no official authority to “compel” a city’s inhabitants to provide “the desired information.” If some felt that the directory canvassers were “meddlers with that which was none of [their] business” (The Charlestown Directory, 1831), the canvasser could not force them to respond. The compilers of directories, however, utilized a number of strategies for sidestepping the individual to obtain such personal information. One approach was to have employers provide information about their employees, while another was to inquire with an individual’s neighbors or those familiar with the neighborhood. Not all employers, however, were so inclined: “one of the proprietors of an establishment, where there are some forty or fifty hands at work, refused them time to give us their names and residences” (Grooms & Smith’s
Indianapolis Directory, 1855). When certain individuals requested that their names be left out of the directory, the compilers often refused on the grounds that it would make the directory “partial” and “defective.”

Although directory compilers depicted the inhabitant’s concerns respecting tax collection and jury duty as irrational fears and misconceptions, there was actually good reason to make such connections. First, some city governments purchased city directories in bulk to be distributed in public offices (although this was by no means the only governmental technology of individualization). Second, there were numerous instances where someone who was hired to conduct an official census for the government then used the “data” collected to publish their own city directory for private profit:

The taking of the Census, in compliance with the law of the last Legislature, made it necessary that the names of all people of the town should be entered in a book; therefore having the material for a Directory, many of the citizens believing that the wants of the community required something of the kind, and to comply with urgent solicitations, the following pages are submitted to the people for their benefit or gratification (Clinton Almanac and Directory, 1856).

Even when the directory canvassers were not directly linked to government, it was not uncommon for them to refer to their canvassing as a sort of “census” conducted by those “who shall prosecute the details of this department of the work with as much care and precision as an agent of the government would take the census” (New Orleans Directory, 1842). What better example is there of governmentality beyond the state in nineteenth-century urban America than the publication of city directories and their apparatuses of knowledge production (including, in some instances, the
privately-financed numbering of houses as in the case of Mobile, Alabama, discussed above)?

City directories were indeed powerful technologies of individualization, which many in the South recognized during the Civil War. As noted earlier, the publication of city directories plummeted between 1861 and 1865 (Figure 4.2). While many Northern cities continued to publish city directories throughout the war, most cities in the South discontinued their publication. The year before the outbreak of war, fears developed among the business community in Charleston, South Carolina, that the canvassers for the city directory were part of a “Northern enterprise,” leading the editor of the directory to assure his readers “that no Northern men, either as printers, or otherwise, have had or have any connection with this publication” (*Directory of the City of Charleston*, 1860). In 1864, the Lexington city directory noted that its canvassers experienced considerable difficulty in obtaining names and addresses from residents:

> Many persons fearing that our canvassers were “assessing officers,” striving to obtain their names for the purpose of fixing an onerous tax upon their property, refused to give their names until lengthened explanations were given them; others, believing that we were collecting matter preparatory to the “draft,” indignantly denied us the information which we sought (*Lexington City Directory*, 1864).

Even in Northern cities, such as Philadelphia, fears of the draft were widespread:

> The “terror” of the “Draft” is more extensively than ever on the people. Every person carrying a City Directory in his hand, is suspected of being an enrolling officer, either military or civil, and the very sight of this otherwise useful medium of information, creates suspicion of ulterior designs, and makes it impossible, in many cases, to get correct information. Spurious names are given, and the head of the family said to be in the army or navy, when the contrary is the fact. Doors are often closed and no names at all obtained; besides, other vexatious obstructions are thrown in the way (*McElroy’s Philadelphia City Directory*, 1865).
As illustrated above, there were similar concerns expressed during times of “peace,” yet the war clearly intensified people’s fears of the “ulterior” motives of directory canvassers, and thereby increased the likelihood of mass resistance to the individualization of the population.

V. Rationalizing Space, Economizing Time, and the Dialectics of Urban Governmentality

In this chapter, I have made a number of key arguments that are central to this study as a whole. First, I have argued that the practice of house numbering—viewed as the construction of a spatial regime of inscriptions—was central to the production of rationalized space and the economization of time. In the United States, the numbering of houses was initially associated with the publication of a city directory, which claimed to provide an “index to the great ledger of the community.” As both technologies of government and instruments of commerce, the city directory and the house number increased the administrative powers of the state, on the one hand, yet also provided the conditions of possibility for the commodification of space and the “economizing” of time, thereby facilitating the circulation of commodities.

Second, the governmental technologies of individualization and totalization were not monopolized by the sovereign state (whether at the local, state, or national scale). The techniques of knowledge production—e.g., the method of door-to-door canvassing—utilized to compile a city directory had much in common with, and were often taken to be, governmental practices of census taking, tax assessment, and military drafting. At times, the role of the official census taker and the city directory
canvasser merged, as when the information collected for a government census was subsequently used to publish a city directory. Also, there were even cases in which city directory publishers took it upon themselves to number the houses of a city when the local government refused to engage in this activity yet did not necessarily attempt to prevent it from occurring if undertaken using private funds. In many cities, the initial stimulus for constructing a systematic house numbering system came from the business community rather than directly from government bureaucrats (although governments eventually came to depend quite heavily on this spatial practice as we shall see in Chapter 5).

The third main argument in this chapter is that the production of “governmental” knowledge was contradictory in many ways. Although women, servants, and children were generally not included in a city directory (and were often depicted as ignorant and irrational), they nevertheless were the chief sources of information that canvassers relied upon to obtain information for a directory. Also, city directories attempted to construct a legible order (fixed permanency) out of the chaotic flux of urban life (fluid transiency). In a way, both of these contradictory elements were viewed as illustrative of “progress,” and the more transient the population, the greater the perceived need for imposing a legible permanency. This contradiction seems to characterize capitalist social relations more broadly. If a legible spatial order is the necessary precondition for capitalist rule, the “creative destruction” (Berman, 1988 [1982]; Page, 1999) of capitalism produces the dynamics of continuous change that prevent such a legible order from ever achieving complete “perfection.”
Although the governmentality literature provides a useful frame of reference for my discussion of the governmental technologies of individualization and totalization, I have also attempted to demonstrate that such an analysis is not inherently antithetical to a Marxian historico-geographical materialism. I would argue, however, that my focus on governmental technologies of knowledge production adds an important layer to the analysis of spatial rationalization that would most likely remain unexplored in most Marxian accounts. However, I think that one can make a good case to argue that house numbering systems were part of what Marx calls “the general preconditions of production” (as cited in Harvey, 1999 [1982]: 226). Marx was generally referring to “fixed capital,” including the physical infrastructure of a city, so it would not be too out of line to suggest that we can view house numbering as such a “precondition” in a broad geographical sense.

The general aim of house numbering and the publication of city directories was to improve the “value of time” by facilitating commercial transactions. As I have illustrated, the spatial prerequisite of producing an “intelligible” city directory was the introduction of some type of house numbering system. In the next chapter, I bring my thematic analysis of the spatial history of house numbering up to the present, considering how the discourse and practice of house numbering was professionalized during the first half of the twentieth century and provided the basis for geo-coding techniques in the age of digital computing.
5. THE MAKING OF A GEO-CODED WORLD:

STREET AND HOUSE NUMBERING IN

TWENTIETH CENTURY AMERICA

Judging by the names given to our streets, we Americans might be considered the least aesthetic people in the world. Nowhere else is there such a general regard, in that respect, for system and convenience, at a sacrifice of every other consideration. Such a locality as “the corner of Avenue A and Twenty-Third Street” is almost as distinctively American as Algonkin and Iroquois names like Mississippi and Saratoga. Our habit of depending for street titles on mere alphabetic and numerical signs may react on us in a way that is not advantageous. We are quite practical and prosaic enough now, and anything that tends to make us more so is not a thing to be desired.

— Crane, “Our Street Names” (1897)

The use of house numbers by the postal, police, and fire departments, by public utilities, merchants, taxicab companies, and by the people themselves, plays such a vital part in everyday life that the importance of a uniform system of numbering cannot be over-emphasized.

— Schwada, “Street Names and House Numbers” (1932)

I. Introduction

In the spring of 1909, the Clearing House of the American Society of Municipal Improvements (ASMI) conducted a survey on the house numbering strategies employed by cities across the United States. Over a hundred cities responded to the ASMI’s request, and the results were published in an article entitled, “Systems of House Numbering” (1909), in the Municipal Journal and Engineer. The article opens by confidently declaring that “[t]he numbering of houses in a city is a

31 The ASMI was a forerunner of the current American Public Works Association (APWA).
municipal function,” yet the author immediately qualifies this initial statement by maintaining that the issue of house numbering “too frequently does not receive the attention from municipal officials which it should” (“Systems of House Numbering,” 1909: 563). Nevertheless, of the 136 cities that responded to the ASMI’s survey, nearly all had already established some type of standardized house numbering “system” and had formally delegated the task of numbering houses to a municipal agency. In most cities, the numbering of houses was the responsibility of the City Engineer, although in a few cases it was delegated to the city’s Building Inspector, City Clerk, Assessor, Superintendent of Streets, Board of Public Works, or even the Mayor himself. In short, by the beginning of the twentieth century, the spatial practice of house numbering had become a taken-for-granted “function” of municipal government.

Gone were the days when the maverick city directory publisher went out and numbered a city’s houses “at his own expense” without official approval from the city council. In fact, the only mention of city directories in the ASMI’s article was a brief remark that the City Council of Beverly, Massachusetts, still hired “the publisher of the local directory” to affix numbers on the houses and allowed him to use “his own judgment in assigning them” (“Systems of House Numbering,” 1909: 569). This example, however, was the exception which proved the rule that city directory publishers had ceased to play the same pivotal role in house numbering that they had during the eighteenth and nineteenth centuries.

With the growing use of the telephone during the latter part of the nineteenth century, the city directory business became “redundant” when telephone companies
began publishing their own directories (Ferris, 1995: 230). City directory publishers joined together in 1898 to organize the American Association of Directory Publishers in order to protect the industry, yet by the 1930s many cities, such as New York, had discontinued the publication of city directories. The city directory industry did not disappear altogether, and in some areas city directories were published throughout much of the twentieth century. Today, new city directories continue to be sold in CD-ROM format chiefly for marketing purposes. By the turn of the twentieth century, however, professional engineers and city planners had taken over the role of devising systematic house numbering plans for America’s cities.

This chapter explores the historical geography of house numbering in the United States during the twentieth century. The vast majority of the existing literature consists of “how-to” manuals tailored to the government technician, so this chapter is a radical departure from current technocratic approaches to the subject of house numbering and geo-coding. My aim is not to evaluate the different methods of house numbering and advocate one system over another, nor is it to praise the virtues of efficiency and spatial legibility in an uncritical fashion. I would rather follow Foucault (1972: 17) in his insistence that we can “leave it to our bureaucrats and our police to see that our papers are in order. At least spare us their morality when we write.” This comment can be extended further by noting that it is not only “our papers” but also entire landscapes that are kept “in order” by the technocratic geo-coders and house numbering systematizers who serve as the administrators of the geo-coded world.
As I have argued in previous chapters, the process of rationalizing the landscape was the spatial prerequisite for the governmentalization of the state and the economization of time. The construction of the sequentially-numbered landscape gave rise to a spatial regime of inscriptions that then became the epistemological foundation of an administrative, or governmental, rationality which valued economic efficiency and legibility. Much of the current literature on house numbering and geocoding is both extraordinarily ahistorical and intimately linked to the praxis of the technocratic ordering of space and society. In stark contrast, this chapter critically examines the spatial history of the geo-coded world from the theoretical perspectives of Foucauldian governmentality studies and Marxian geography. Section II provides a critical analysis of the standardization of house numbering “systems” during the twentieth century. I also document the emergence of a professionalized engineering “discourse” on street and house numbering. This discursive formation was not merely an abstract theoretical exercise but was directly tied to the concrete production of the abstract spaces of twentieth-century American cities.

In Section III, I examine the counter-discourse that was articulated in response to the engineer’s sequentially-numbered grids. On the surface, it is easy to view this debate as part of the typical clash between Utilitarianism and Romanticism, or between what C.P. Snow (1998 [1959]) has called the “two cultures” of the sciences and humanities. Yet, I shall demonstrate that despite their seeming incompatibility, these two discourses shared much in common and a number of attempts were made at reconciliation. I also consider the various forms of public resistance to street and
house (re)numbering projects, as well as how city engineers attempted to marginalize dissent.

Section IV concludes by describing the recent upsurge of “governmental” interest in house numbering at the end of the twentieth and beginning of the twenty-first century. The widespread adoption of Geographic Information Systems (GIS) at all levels of government—especially at the municipal scale—has dramatically increased the ability of both the state and the private sector to link traditional databases with geo-spatial information as a means of spatially monitoring individuals and populations, as well as public and private property. The practice of “geo-coding”—that is, including a spatial attribute (most often a street address in urban contexts) for each entry within a dataset and then geo-referencing this attribute to a given set of geographic coordinates of latitude and longitude—is the technical basis for developing a GIS. It is for this reason that spatial analysts have come to recognize the “importance of addresses” (Eichelberger, 2000b) with respect to the development of GIS technologies.

Another related practice that has reinvigorated an interest in house numbering is the implementation of Enhanced 9-1-1 (or E9-1-1) emergency services during the last quarter of the twentieth century. I provide a brief overview of these spatial practices, as they relate to house numbering and the construction of a geo-coded world, and I offer a critical analysis of geo-coding as a technology of government and instrument of commerce. I then close by exploring the social implications of house numbering as a biopolitical strategy in the age of geo-spatial technology.
II. The Concrete Production of Abstract Space and the Grid of “Municipal Orderliness”

As the engineering profession emerged as a key player in the development of urban infrastructure in nineteenth-century America, one of the major tasks consigned to civil engineers and surveyors was to design systematic street plans as a means of organizing urban space. Laying out cities using the logic of the coordinate grid became a commonplace practice during the nineteenth century (Mumford, 1961; Reps, 1965), and by the first half of the twentieth century systematic street and house numbering had, by many accounts, become “a vital part in everyday life” (Schwada, 1932: 186). This, in turn, gave rise to an institutionalized discourse on the virtues of constructing “scientific” street numbering systems based on the principle of functional efficiency.

Journals such as Civil Engineering, the Municipal Journal and Engineer, Public Management, The American City, and Public Works served as a medium for the articulation and circulation of the discourse on uniform street and house numbering. Many of the contributors to these journals were practicing city engineers or city managers from across the United States who were in the midst of devising street and house numbering systems in their respective cities and towns (and the articles published were most often brief summaries of recently completed projects or proposals for new techniques). These journals offered a forum within which sequential landscape numbering projects and plans could be compared and discussed across the nation.
Although numerous street and house numbering plans were described and proposed in these journals, most conformed to the norm of establishing two perpendicular baselines that would serve as the coordinate axes of a grid plan. The basic aim was to make “a trail that any one can follow, and find any address without map or street guide, provided he knows his alphabet and can count” (“A Solution for the Street Maze Problem,” 1939: 18). The underlying assumption of this discourse was that the rectilinear geometry of the grid in itself was inadequate to produce a rationalized space if not combined with a “system” of alphanumerical ordering. In other words, it was not simply any type of grid but rather the coordinate grid—which united rectilinear form with sequential numbering—that became the standard for spatial organization within the field of civil engineering.

To use the terminology developed in Chapter 3, the spatial regime of inscriptions based upon the principle of sequential numbering was more essential than the strict adherence to the rigid straight lines of the grid when it came to the production of abstract space as a governmental ordering device (Figure 5.1). It is for this reason that a critical analysis of the discourse and practice of street and house numbering in twentieth-century America is so important, because it bypasses the stale formalist debate which sets the grid against the organic layout, the straight line against the curve, or more generally the “planned” as compared to the “unplanned” cityscape—where the planner’s choice is narrowly framed in binary terms (grid/organic, linear/curve, planned/unplanned), forcing the critic to privilege one side over the other. Although urban morphologists and urban planning historians tend to
Figure 5.1: The primacy of sequential numbering over rectilinear geometric morphology in the geographical production of abstract space (Selkirk, 1982)

emphasize the geometric form of different settlement patterns (Stanislawski, 1946; Reps, 1965; Rowland, 1966; Lynch, 1981; Whitehand, 1981; 1987; Slater, 1990a; Slater, 1990b; Vance, 1990; Kostof, 1991; Whitehand and Larkham, 1992a; 1992b), the engineers in charge of rationalizing urban space in twentieth-century America were concerned not only with the city as form, but also with the city as “text.”

In Chapter 4, I illustrated how city directory publishers viewed the city as a large recordkeeping book (a “ledger”), in which house numbers and the directory functioned as a city’s “page numbers” and “index,” respectively. This analogy of the city as a text was drawn upon in twentieth-century engineering journals as well. “Like the paging of a book,” noted Elmer Lee (1901: 78-9) in the Municipal Journal and Engineer, “street signs are a necessity . . . . No publisher would think of omitting the
numerals at the head of the pages of a book. None the less imperative is the importance for well ordered and sightly street signs.” Engineers insisted that the physical typography of the city should be systematic, legible, and “so simple that a child can easily master it” (Shibley, 1938: 91).

The emphasis on thinking in terms of “systems” is key here, even during the early twentieth century. In the ASMI article mentioned at the beginning of this chapter, the author insisted that “some sort of system must be adopted, even if it is a poor one or is different for each street” (“Systems of House Numbering,” 1909: 563). Uniformity and simplicity at the citywide scale were seen as the ultimate virtues of a systematic house numbering scheme, yet it was implied that “some sort of system” (even a “poor one”!) was better than no system at all. In other words, it was not so much the affixing of numbers upon houses alone but the construction of a serialized order of coordinated inscriptions that was so enticing to engineers and city managers.

Over the course of the twentieth century, a number of different house numbering systems were proposed and implemented, many of which had their origins in the nineteenth century. Recall from Chapter 4 that early attempts to number houses in Philadelphia and New York relied on the “old-fashioned English system of numbering” (Isaacs, 1940: 28), with houses being numbered consecutively along one side of a street and then again back down the other side of the same street. As mentioned in the previous chapter, this technique quickly gave way to the odd/even distinction during the 1790s. Yet, the odd/even system had its own contradictions. In most cases, the enumerator simply numbered the existing houses, which meant that
when new structures were built in between the numbered houses, they were given fractional rather than whole numbers.

During the mid-nineteenth century, a new system was proposed and came to be known as the “Philadelphia System,” or the block (decimal) system, of house numbering (Figure 5.2). The block system was first introduced in Philadelphia by the City Councilman John F. Mascher around 1860-1, and it provided one hundred “theoretical” numbers for each city block, regardless of the actual number of buildings existing at the time of enumeration. This system was ideally suited for gridiron cities, where streets were laid out perpendicular to one another. In
Philadelphia, the numbers began at the Delaware River in one direction, and Market Street provided a baseline for numbering houses along streets that ran perpendicular to the river. The Philadelphia city directory of 1861 noted that “Persons can, by merely looking at the numbers on the Houses, know how many squares [i.e., blocks] they are from the Delaware or Market Street . . . . Numbers properly arranged, suggest distances to the mind; but improperly placed, they lead to confusion” (McElroy’s Philadelphia City Directory, 1861). In gridded cities that also used numbers as street names, the Philadelphia System enabled the systematic coordination of street and house numbering (e.g., buildings between 3rd and 4th Streets would have house numbers between 300 and 400, and so on).

This system proved extremely popular during the second half of the nineteenth century. By the early twentieth century, most U.S. cities either used the block system of numbering or the related equal interval method. The latter system also made use of “theoretical” numbers, with street frontage being numbered at equal intervals rather than basing the numbering system on pre-existing built structures. It was common practice to assign a new number every 20 to 25 feet along a street (regardless of the number of houses then constructed), although the interval in business sections was often smaller than that in residential areas (“Systems of House Numbering,” 1909).

This shift away from numbering discrete “objects” (i.e., existing buildings), and towards the establishment of an invisible grid of equal intervals drawn on a map from which houses could be numbered, may at first appear little more than a mere technicality. However, I would argue that it marks a major turning point in the spatial
history of the concrete production of abstract urban space under modern capitalist rule. It was, in short, one way of attempting to establish permanence and spatial fixity while also contending with the dialectic of creative destruction unleashed by modern capitalism. The continuous construction and demolition of buildings according to the dictates of the real estate market dramatically transformed the built environment of U.S. cities during the nineteenth and twentieth centuries (Page, 1999; Scobey, 2002). Any attempt, therefore, to construct a fixed spatial order based upon the numbering of discrete buildings that existed at one given point in time was futile and instantaneously became outdated and obsolete (just as a city directory was often obsolete on the very day it was published, since people had moved between the time that the canvass was taken and the directory’s final publication).

What the equal interval method did was construct a “theoretical space” of permanence and constancy that remained conceptually unaffected by the concrete changes in the built environment. Buildings could go up and come down, yet the theoretical space of equal intervals was consciously designed to anticipate and enable such transformations to occur in the first place. Using geographer David Harvey’s (1996) terminology, we can see the use of both the Philadelphia System and the equal interval method of house numbering as governmental attempts to construct spatial “permanences” in order to administratively contain the chaos of the capitalist real estate economy. The morphology of the grid plan itself was such a spatial permanence, yet the reorganization of a city’s spatial regime of inscriptions—the shift from numbering existing “objects” to providing theoretical numbers by intervals—
was one of the most significant transformations of urban spatial governance in nineteenth-century America.

Although such methods were first developed during the nineteenth century, they became widespread in twentieth-century cities and provided a basic framework for the emerging professionalized discourse on street and house numbering. The aim of this discourse was, as one anonymous author in the *Engineering News* put it, to use street and house numbering systems to create a sense of “municipal orderliness” (“Street-Name Signs,” 1915: 757). While the postal service was often responsible for devising route and box numbering schemes in rural communities (Curry *et al.*, 2004), the engineering profession attempted to monopolize this spatial practice in large cities and smaller towns. This claim to professional territory was reiterated in the pages of engineering journals throughout much of the twentieth century to establish its legitimacy. “The marking of streets and the numbering of houses,” noted one author, “are very proper functions of a city engineering department” (“Street-Name Signs,” 1915: 757). Early twentieth-century engineering textbooks, such as A. Prescott Folwell’s *Municipal Engineering Practice* (1916), also began to formalize the methods of house numbering applied to American cities and towns.

It is worth very briefly examining a number of the different “systems” of street and house numbering that were proposed in order to get a sense of the variety of techniques employed in the production of abstract space. In providing this brief spatial history of various attempts to construct coordinated street and house numbering systems, the purpose is not to glorify engineers as the champions of rationality and order. On the contrary, the goal of such an exercise is to consider the
actual spatial analytics that were utilized in the production of what we might call the “spaces of concrete abstraction” that so characterize the modern American landscape. In other words, it is not enough to simply generalize about the production of something generically called “abstract space” (Lefebvre, 1991 [1974]); rather, one must examine the precise manner in which actual abstract spaces were produced (both materially and conceptually), as well as the multiple ways in which landscapes have been rationalized historically, in order to understand the spatial history of the production of abstract space.

One attempt to create a house numbering system which extended beyond the city limits into rural areas was known as the “Clock System” (Denman, 1968), because it numbered houses as if the landscape were one giant clock with its center in the middle of a city or town (Figure 5.3). Imaginary lines were mapped from the center of the city outward indicating the “clock” number or zone, while concentric

Figure 5.3: When space becomes time, the landscape as clock (Denman, 1968)
rings marked the number of miles away from the city center. Houses were then lettered rather than numbered to create a unique alphanumeric code. According to this system, addresses were given by listing the clock number, mile number, house letter, and city name (e.g. 6-2-A Alton). Although this numbering plan was not widely adopted, it provides a useful illustration of the parallels between the rationalization of space and the ordering of time. The Clock System of house numbering, in effect, attempted to construct and order abstract space as if it were linear time.

Other attempts at numbering rural areas were proposed and implemented, yet the vast majority of the engineering literature focused on the numbering of houses in urban centers. There were many plans proposed to coordinate the naming of streets with the numbering of houses. Three early street naming plans—those of Philadelphia (1682), Washington, DC (1791), and New York City (1811)—came to be seen as models for other American cities and towns (Mencken, 1948; Stewart, 1982 [1945]). All three were grid-plan cities that, in one fashion or another, adopted the practice of numbering streets as opposed to only using names. Philadelphia had numbered streets in one direction and named streets in the other, whereas the original New York plan of 1811 consisted of numbered east-west “streets” as well as numbered north-south “avenues” (with a few smaller avenues that were alphabetized). The distinction between east-west “streets” and north-south “avenues” (or vice versa) immediately enabled one to determine the direction of the road for which one was searching. In Washington, however, east-west streets were numbered, north-south streets were lettered, and diagonal avenues named after the states of the Union were overlaid upon
this alphanumerical grid. Moreover, the Washington coordinate grid was divided into four quadrants (NE, NW, SE, SW), with its origin at the Capitol.

Of the three, the Philadelphia plan proved to be the most popular since it provided a compromise between the advocates of street numbering and those who preferred the naming of streets (see Section III below). Stewart (1982 [1945]: 247) explains the success of the Philadelphia model by noting that:

Americans had been familiar with the Philadelphia pattern for nearly a hundred and fifty years before the New York adaptation even got on paper, and many more years elapsed before the midtown section [of Manhattan] became important. By that time most of the towns east of the Mississippi had already named their streets. The New York pattern was to be of influence in a few newer eastern towns, and in the newer sections of older cities, and especially in the farther West.

As for the Washington plan, Stewart (1982 [1945]: 246) wryly remarks that “it was nowhere dominant. The Americans simply did not like it.” This is a bit of an exaggeration, however, because the use of “quadrants” to divide a city into a directional coordinate system became a basic component of many twentieth-century street and house numbering plans.

Although most cities had begun numbering houses as early as the eighteenth and nineteenth centuries, movements arose in a number of cities during the first half of the twentieth century—such as in Chicago, Salt Lake City, and Milwaukee—to systematize what were taken to be the “haphazard” and “hodgepodge” methods of street naming and house numbering currently in use (Schwada, 1932: 186). Most city engineers looked favorably upon the “quadrant” system as a means of systematically ordering urban space. Two of the most widely cited twentieth-century models for
street and house numbering—the Schwada plan and the Lyman plan—have their origins in this period, and both were based upon the quadrant system.

On January 21, 1932, the City Engineer of Milwaukee, J.P. Schwada, presented a paper at a meeting of the American Society of Civil Engineers in New York City, where he reviewed various different house numbering systems and proposed his own plan that took the “quadrant” concept as its fundamental axiom. Several months later, Schwada’s paper was published in *Civil Engineering* under the title, “Street Names and House Numbers: Review of Systems Proposed and in Use, with a Recommended Uniform Plan” (1932). Interestingly, Schwada’s plan combined different aspects of the Philadelphia, Washington, and New York models (Figure 5.4: Schwada’s “Universal Plan” of house numbering as a Philadelphia-New York-Washington hybrid (Schwada, 1932)
5.4). It consisted of a grid layout with two perpendicular baselines (Main Street and Division Street), which divided a city into four quadrants. Schwada’s system of street designation was rather convoluted, with east-west roads south of Main Street and north-south roads east of Division Street being referred to as “avenues,” whereas east-west roads north of Main Street and north-south roads west of Division Street were called “streets.” All north-south streets and avenues were numbered and all those parallel to the east-west axis were named in alphabetical order. Prefixes were also given depending on the quadrant in which a street or avenue was located. Houses could then be numbered using the block system or equal intervals.

Although Schwada was clearly drawing on the three models mentioned above, he never mentioned any of these cities by name and simply presented them as generic plans, presumably assuming that his readers would be familiar enough with the topic to make the connection. Schwada’s (1932: 189) proposal for a “universal plan” was more than a hypothetical speculation. In fact, it was based, in large part, upon the street and house numbering system he had designed for the city of Milwaukee a few years earlier, where he served as City Engineer (“Milwaukee Plans New House-Numbering System,” 1929).

Within months of the publication of his article, engineers from around the country sent letters to the editor praising Schwada’s universal plan while also proposing plans of their own. One writer applauded the use of “logical quadrants” (Combs, 1932: 387) while another suggested that streets “be given botanical names, in alphabetical order” (Jupenlaz, 1932: 509). The Chief of the Division of Design at the Bureau of Public Roads in Washington, DC, could not help but heap praise upon
his own city and remarked that Schwada “rather surprisingly made no reference to the system long used in Washington, D.C. The scheme is so excellent, it merits description” (James, 1932: 586). Whether Stewart was correct in claiming that all “Americans simply did not like” the Washington plan, we will never know. One thing is for sure, however: twentieth-century engineers found the quadrant system of considerable use in the spatial rationalization of urban landscapes.

In the July issue of Civil Engineering, the consulting engineer Richard Lyman (1932: 455, emphasis added) from Salt Lake City, Utah, noted that:

The article by Mr. Schwada on “Street Names and House Numbers,” in the March issue, is of particular interest to me. In connection with it, I should like to outline a system of my own for numbering streets and houses which would permit a traveler to find any address without a map or other assistance. This system may be applied in any city without serious cost. It provides for two axes or coordinates intersecting near the center of the city. If two coordinate values are given for any point, that point will be accurately located. For example, the term, “372 East, 296 South,” locates an area 12 ft. square, if the unit used is 12 ft.

Lyman essentially sought to eliminate the need for street names altogether—the title of his brief note is “Street Names May Be Eliminated”—and at the same time attempted to systematically coordinate a city’s street and house numbering systems. More importantly, it could be “applied in any city,” according to Lyman, which meant that a strict adherence to the rectilinear geometry of the grid, however desirable to the engineer, was not a necessary requirement to use Lyman’s system of numbering.

In the late 1930s and early 1940s, Lyman helped redesign the street and house numbering system of Salt Lake City, using the technique described above. Two baselines were chosen and streets were numbered sequentially (by hundreds) from
these axes and named according to their position in relation to the baselines. What distinguished Lyman’s system from that of New York or Washington was that the compass directions themselves—North, South, East, and West—were used as street names and the numbering of houses coincided with the street numbering system (Figure 5.5). For instance, a street 8 blocks north of the east-west baseline would be called “800 North Street,” and a house that was located 8.4 blocks north of the same baseline and, say, 19 blocks east of the other would have the full address of “840 North, 1900 East Street.” Lyman’s plan was also used in Saint George, Utah, as well as in Seattle, Washington. Lyman and Richards (1938) pointed out that a similar system could likewise be devised for irregularly laid out cities as well (Figure 5.6).
By the second half of the twentieth century, Schwada’s and Lyman’s plans themselves became classic textbook illustrations of the “proper” method of rationalizing a city’s street and house numbering systems (Planning Advisory Service, 1950; *A Guide to Street Naming and Property Numbering*, 1960; Vogel, 1963; Corwin, 1978). These “how-to” technical manuals formalized the various street and house numbering practices used across the country in order to provide city planners with a general set of rules that could be applied to particular situations. Such textbook accounts also attempted to establish street and house numbering as a legitimate body of governmental knowledge deemed essential to the production of spatial legibility.
III. Resisting the Imposition of “Meaningless Symbols” by “Persons Without Brains”

While there was near universal agreement among engineers concerning the benefits of sequentially-ordered street and house numbering systems, voices of dissent emerged in journals such as The Architectural Record, Lippincott’s Magazine, the Christian Examiner, and even The Florida Engineer and Contractor. Most critics of uniform street numbering insisted that such plans were unaesthetic, meaningless, and “hopelessly prosaic” (“Suggestions for Systematic Street-Naming,” 1926: 185). One critic maintained that although the merits of numerical and alphabetical ordering systems were “well known,” this was simply because such plans were “extremely easy to persons without brains” (“Suggestions for Systematic Street-Naming,” 1926: 185). Using numbers and letters as street names, critics charged, was paramount to rejecting the history and individuality of a place by imposing “meaningless symbols” (Crane, 1897: 265) upon the cityscape.

The imposition of numbers instead of names was seen as an act of cold-heartedness and impersonality. Giving a street a name was compared to the naming of children, yet, whereas “every man dies, and his name goes with him; but a city, a town, or a street may live a thousand years . . . [and] a poor name may do a place a good deal of harm” (“On Giving Names to Towns and Streets,” 1869: 20). The very thought of naming a child with a numerical or alphabetical designation was absurd, the argument went, so how is naming streets any different? Such a scheme of numbering people, places, or streets was viewed as a bureaucratic convenience that reduced its subjects to mere objects of classification. As one author put it, “[i]n large
industrial plants employees, particularly laborers, are designated by a number instead of their name. Admittedly it is convenient, but imagine the same treatment given to the world’s poets and artists, its fair women and our children” (“Suggestions for Systematic Street-Naming,” 1926: 185, emphasis added).

Protecting the “character” of the name against the onslaught of the impersonal number was seen by some as having major moral and political implications. “Our habit of depending for street titles on mere alphabetic and numerical signs may react on us in a way that is not advantageous,” explained critic William Ward Crane (1897: 264). “We are quite practical and prosaic enough now,” he continued, “and anything that tends to make us more so is not a thing to be desired.” Not all critics were categorically opposed to practicality, yet they maintained that the naming of streets should be “confided to judicious and enlightened persons” (“On Giving Names to Towns and Streets,” 1869: 19), who most certainly would not resort to numbering city streets.

At first glance, this counter-discourse of street naming appears to be diametrically opposed to the rationalized schemas of the engineers, yet they are both part of the same “problematization” of spatial ordering, to borrow Foucault’s (1984b) terminology. The common assumption of both views is that the municipal arm of the state must inscribe at least some type of spatial order upon the landscape, whether numerical or otherwise, to maintain the social order. In fact, there were numerous cases in which these seemingly opposing views were actually reconciled (e.g., it was common practice to substitute names for numbers or letters so long as the names themselves were in some type of alphabetical order). The virtues of systematicity
were not monopolized solely by engineers. The search for a systematic ordering scheme, argued critics, need not be limited to the impersonal number or letter. “It is not beyond probability,” Crane (1897: 266) noted, “that titles may be found which will be systematic and easy to remember as well as suggestive and appropriate, and that street names may help the school-teacher without being a temptation to profanity for any one else.”

Some suggested that all streets in a city or town be named after local heroes, poets, presidents, or even states to construct a common theme. Such street naming schemes also maintained the rationalized system of numerical house numbering and the alphabetization of names as a means of uniting sequential ordering with commemorative naming. A number of these schemes were even taken up by engineers themselves. One suggestion was to use the colors of the rainbow in alphabetical order as a coherent system for ordering urban street plans (Katz, 1946), while another sought to give the public a geography lesson by naming streets after:

the states [of the Union] in the order in which they lie geographically for streets running approximately north and south, giving the easternmost street the name of an Atlantic seaboard state, and naming successive streets in the order in which they lie geographically toward the west. This order could be taught to the school children, and any person on the street asking a youngster for directions if he was not familiar with the system, would be answered instantaneously, that the avenues run the same as the location of states from east to west, and it will then be an easy matter for him to know just how many streets away his destination is . . . . I consider that this would be a great lesson in geography (Stewart, 1914: 698).

This geography “lesson” was an explicit attempt to construct a sense of national unity by replicating the nation’s geography in miniature form within a city’s streets as a means of producing better citizens. Those who criticized the numbering or lettering of streets, therefore, were not opposed to the construction of an organizing “system” per
se; they simply found alphanumerical systems to be lacking in aesthetic quality. However, it is interesting to point out that those intellectuals who vehemently critiqued the numbering of streets rarely, if ever, questioned the numbering of houses.

Although it can be argued that, in general, engineers and humanists formed two distinctive camps in the debate over street naming in the United States during the nineteenth and twentieth centuries, when examining the differences between them we should not lose sight of the commonly-held assumptions that both sides shared with respect to systematically ordering urban space. There were, in fact, some attempts to reconcile these two competing planning traditions. One such plan, proposed by Eugene Van Cleef (1950) in *The American City*, was to include curvilinear roads within a larger rectilinear matrix of numbered streets and avenues (Figure 5.7). Such compromises were often attempts on the part of engineers to accommodate the craze for curvilinear suburban development in the post-War period. As Van Cleef (1950: 141) pointed out, “[a]lthough the writer of this item prefers the rectilinear pattern throughout a city as functionally efficient, the compromise suggestion here will help bring some order out of the chaos now extant in the irregular design.” It was in this same spirit that house numbering plans were adapted to the landscape of post-war suburban America (Figure 5.8).

In addition to scholarly challenges to the rule of number in street naming, there was also considerable public resistance to the implementation of uniform street and house numbering projects. One of the most vexing problems for governmental systematizers was convincing the public that a “modern scientific street-name system” (Long, 1942: 55) would be the most desirable solution for the spatial
Figure 5.7: The “two cultures” reconciled? (Van Cleef, 1950)

Figure 5.8: Using the grid to number the curve—the production of abstract space in post-War suburban America (Corwin, 1978)
organization of American cities. This may seem counterintuitive to many today, since
most urban dwellers in the U.S. take for granted the sequentially-ordered space that
they inhabit. Indeed, since engineers did not think that they could imagine a more
“rational” system than the coordinate grid, many of them were perplexed by the fact
that “the citizens in thousands of American cities today seem reluctant to persuade
their city officials to adopt a uniform system of property location” (Martin, 1951: 53).
Even more so, there were reports of “vigorous resistance to attempted change”
(Martin, 1951: 53) when city councils put forward renumbering proposals. Many
proponents of street and house numbering projects portrayed the opposition as
marginal, over-sentimental, and impractical, while also enforcing compliance through
a number of administrative measures.

The case of Gallatin, Tennessee, is instructive in this regard. After years of
unregulated urban growth, the city eventually undertook a major reorganization of its
street and house numbering system during the middle of the twentieth century. The
main proponents of the new system were governmental agencies and private
companies. As the Regional Director of the Tennessee State Planning Commission,
Daniel Martin (1951: 53), explained:

Prior to the adoption of the new system about one third of the houses and
buildings were numbered, but there was little semblance of a numbering
system, and property location became more and more of a problem as one
proceeded away from the central city square. The post office, the business
men, the local chamber of commerce, the telephone and telegraph companies,
the city fire department and water department—all united in an appeal to the
city council for reform.

It is worth emphasizing that governmental agencies and private companies, rather
than citizens’ groups or individual residents themselves, were the ones who lobbied
for a new “numbering system.” Easing the burden of administration—both public and private—was the main concern, as opposed satisfying the “basic” navigational needs of residents.

Nor were private citizens able to participate in the development of the new street numbering plan. Instead, the City Council referred the matter to the City Planning Commission for further study. The Commission then consulted “trained city planners, employed by the state” for further assistance (Martin, 1951: 54). As Martin (1951: 54) noted, “[t]he technical details of the renumbering were worked out by the state planning technicians.” The only mention of local citizen participation was a reference to the fact that “a small group of chronic complainers and a few people who did not understand how the system worked” were opposed to the plan (Martin, 1951: 53). Martin simply dismissed such resistance by framing it as a sentimental outburst with no logical basis. “Objections, frequently based upon minor points,” he contended, “run all the way from sentimental attachment to a particular street name to the refusal to discard a box of stationery printed with the old address” (Martin, 1951: 53). Such sentiments, according to Martin, were opposed by the dictates of common sense. “Experience has demonstrated,” he argued, “. . . that, once a city has adopted an orderly method of property numbering, the citizens usually accept the change and within a relatively short time become staunch advocates of their new system” (Martin, 1951: 53).

Based on Martin’s assessment, it would appear that uniform street and house numbering was universally agreeable to all except impractical sentimentalists. Yet, a more complicated picture emerges when one examines why it is that most resistance
to such numbering schemes seemed to evaporate once the system was set in place. Citizens did not simply adopt such numbering schemes out of some universal understanding of the rational order of the system. Rather, in most cases they were threatened with fines and exclusion from utility services as a means of forcing compliance. Martin (1951: 72-4) noted that many other cities were faced with the same problems as Gallatin, and he recommended that they consider charging residents for new house numbers by mail “perhaps through the water department,” since people would inevitably have to pay their water bills in order to survive.

When the Borough of Queens conducted a renumbering project during the first quarter of the twentieth century, the city used a variety of methods to force residents to comply with the new measures. As the city engineer of the Borough of Queens explained in a 1928 article in *The American City* entitled, “Bringing Order Out of Chaos in Street Naming and House Numbering”:

One force that materially helped in carrying out this great undertaking was the support of the Borough Building Department, in withholding permits for new buildings until the builders had first obtained the new numbers from the Topographical Bureau. Great assistance was also rendered by the public utility corporations, such as the telephone and gas companies, in withholding service until the applicant had first obtained his proper house number. The local newspapers also, without regard to politics, rendered hearty support to the change; and of course the postal authorities were in full accord with the new system, and in numerous instances notified householders that they would not be responsible for the delivery of mail unless the owner should put up the proper number (Powell, 1928: 92).

Faced with such an array of measures to enforce compliance, it is little wonder that in most cases after the plan was adopted “the citizens usually accept the change.” In short, unless one wished to live “off the grid” entirely, one had little choice in accepting the new sequential ordering schemes of the municipality. Examining the
actual enforcement techniques devised by city governments during the twentieth century further substantiates the claim that during the twentieth century uniform street and house numbering projects were initiated more as a means of maximizing administrative efficiency than in easing the geographical orientation of the “average citizen.”

In the case of Queens, the City Engineer first attempted to explain the success of the project as being a result of “public spirit,” but he went on to emphasize the crucial role of what he called “enlightened self-interest.” “For example,” he noted, “it is of great advantage to the gas, electric light, and telephone corporations that there should be, for instance, only one No. 1 Washington Street, instead of thirty” within one municipality (Powell, 1928: 92). Of course, eliminating duplicated street names and systematizing a city’s house numbering system made the cityscape more “legible” for the “average” inhabitant as well. Yet, it was chiefly administrative convenience that carried the day in promoting and enforcing rationalized street and house numbering systems in twentieth-century America.

While most engineers framed their arguments for uniform house numbering in terms of its benefits to the “average citizen,” it is often evident that such systems were designed principally to simplify record-keeping practices for city governments, public utilities, and private businesses. One author noted that unsystematic house numbering plans resulted in a “waste of time and loss of patience . . . [which] slow down the governmental and business operations of a city” (Martin, 1951: 53). What was clearly needed, from this perspective, was “some systematic and business-like arrangement in . . . city numbering” (Moffett, 1917: 428), which would, as another author noted,
“be worth thousands of dollars a year to merchants whose employees are called upon to make deliveries during both night and day” (Marple, 1922) (Figure 5.9). Here again is a call to economize time by rationalizing space in a “business-like” fashion (see Chapter 4).

Systematically numbering a city’s streets or houses was viewed as a way of bringing a “business-like arrangement” to governmental planning. “The result,” argued Crane with a bit of humor (1897: 264), “is that many of our city maps look like a mixture of the English alphabet and the multiplication-table, with a few proper names thrown in to relieve the monotony . . . . Yet it is by no means certain that this
widespread ignoring of everything but ‘business methods’ in naming our thoroughfares does not to some extent influence our character as a nation.” Turning the landscape into a “multiplication-table,” it seemed, was simply one more reason to characterize the American nation as “a calculating people” (Cohen, 1999 [1982]).

Business-like management of a city street system was based upon the determination to establish technical criteria for the construction of a “legible” landscape. A number of key variables were utilized to “scientifically” determine a suitable street plan: legibility, visibility, durability, appearance, and cost (“Street Signs—Their Character and Location,” 1909; “Selection and Placing of Street-Name Signs,” 1916; Nicholson, 1931). These variables were defined, or operationalized, in such a way that they could be measured in quantitative terms with respect to any street sign or house number under scrutiny. Here were the mundane mechanics of engineering a “legible” landscape in action. In the search for a sign “polished for perfect readability” (“Weatherproof Street Intersection Signs,” 1928: 197), city engineers conducted numerous “scientific” tests to determine the most suitable signs.

Legibility could be measured by the contrast between the color and size of letters or numbers and the background color of the sign, while the “visibility test” was defined as “the distance which the observer was from the sign at the time the sign could be read” (Rockwood, 1937: 170). Competing signs were ranked according to these criteria and then the rankings for each variable were totaled up to form an overall assessment of the sign (Figure 5.10). The key issue was making street signs
Figure 5.10: Urban governmentality and the "Visibility Test" (Nicholson, 1931)
and house numbers “legible at a considerable distance at all times” (“Street Signs That Are Readable Night and Day,” 1929: 197). The call for legibility was central to the modernist management of the physical typography of the cityscape.

When urban theorist Kevin Lynch (1960; 1981) advocated that visual “legibility” should be a fundamental principle of urban design in post-War America, he was merely extending the well-established discourse on the legibility of street typography to a consideration of other aspects of the “city image,” such as edges, districts, nodes, and landmarks (see Chapter 3). Lynchian cognitive mapping, then, traces its intellectual roots back—at least in part—to the modernist engineering discourse on the virtues of legibility in street signage and systematized house numbering, as discussed in the current chapter. This goes a long way toward explaining why cognitive mapping theorists aligned themselves during the 1990s with positivist spatial analysts in their quest to geo-code the world (Gold, 1992).

IV. Governmentality, Technoscience, and the Making of a Geo-Coded World

Without succumbing to a crude technological determinism, it is fair to say that the development of geo-spatial technologies—such as Geographic Information Systems (GIS) and Geographic Positioning Systems (GPS)—significantly transformed the day-to-day practices of modern government during the latter quarter of the twentieth century (Masser et al., 1996; Schuurman, 2004; Jensen et al., 2005). It is not so much that the entire epistemological framework of modern governmental rationality has somehow been transformed beyond recognition but rather that the
apparatus of governmental surveillance has, as it were, been “up-graded” into the digital age.

One of the defining characteristics of geo-spatial technology is its ability to combine non-spatial attribute data with a spatial reference of some kind. A commonly used spatial reference for “geo-coding” happens to be the street address (at least when it comes to managing people and property). GIS advocates have enthusiastically declared that street addresses are indispensable to the functioning of geo-spatial technology. “Addresses truly are the ‘locus of GIS,’” notes Pierce Eichelberger (2002), GIS Manager in Chester County, PA:

and we are finding that addresses are used and needed by nearly every government computer application that deals with people, places, things or events. Addresses have been found to be the most common of ‘geographic denominators’ among applications in all governmental settings, i.e. cities and counties, sunbelt and rust-belt locales, old and new places . . . . The powerful graphics of the GIS also quickly show the orientation of streets to assigned addresses.

Since most governmental datasets contain address information, this enables spatial analysts to “join” them together using the address as a common attribute, or what one author calls “a formal administrative key” (Lind, 2003).

There has also been a push to move beyond the standard two-dimensionality of most GIS applications towards a fully integrated “3-D GIS” (Eichelberger, 2000a). Within government circles, the chief impetus behind this demand for 3-D GIS is to increase the ability for spatial individualization. Instead of merely using street addresses to identify individual buildings, there is a growing interest in securing an even finer level of detail. Eichelberger (2000a: 38-9), for instance, insists that “suite, room and occupancy identifiers should become ‘full partners’ in any address
According to its promoters, such as Eichelberger, 3-D GIS offers the prospect of accurately “mirroring” everyday urban life for the purposes of administrative management and disciplinary policing. “Perhaps, most importantly,” he contends:

the new capability gives us the ability to more accurately picture the truer condition of our urbanizing and developing communities. When we hear about the success of community policing strategies and the impact of “zero tolerance,” we must understand that the collective view of governmental activities as they relate to properties, structures, businesses, dwelling units,
etc. can begin to have a similar affect (Eichelberger, 2000a: 42, emphasis added).

Here we can see how the new geo-spatial discourse is directly linked to a disciplinary praxis of governmental administration and control that depends upon increasing the specificity of spatial individualization to manage people and property.\(^\text{32}\) Despite over two decades of philosophical critique (Rorty, 1979; Haraway, 1991; Hacking, 1999), the correspondence theory of truth continues to serve as the mainstay of the spatial analyst’s geographical imagination as the “mirroring” of property and population continues into the twenty-first century.

As a technology of government, GIS has recently been integrated into emergency response systems in the United States, resulting in a renewed commitment to systematic house numbering across the country. Beginning in the 1970s, the implementation of Enhanced 9-1-1 (E9-1-1) emergency services—which provide the emergency operator with the caller’s phone number and street address—led to a reevaluation of existing house numbering practices, especially in rural areas where the route and box numbering system devised by the Postal Service had long been in use (Curry et al., 2004). Under the latter system, postal addresses were given in a piecemeal fashion as each new building was constructed. This was often adequate for the purposes of mail delivery, where the mail carrier was familiar with following the same route, yet it proved quite difficult for emergency responders (police, ambulance driver, etc.) who did not necessarily have detailed local knowledge of the designated

\(^{32}\) It should be pointed out that there is a growing movement among GIS scholars to increase the participatory aspects of GIS technology so that it is not simply a tool of top-down, bureaucratic and administrative power. Public Participation GIS (PPGIS), feminist appropriations of GIS, and critical GIS more broadly are the leading responses to top-down appropriations of geo-spatial technologies (see Schuurman, 2004).
routes. During the 1980s, there were a number of proposals to create rural “locatable addresses” that replaced the route and box system with city-like street naming and house numbering conventions (Curry et al., 2004: 360).

By the mid-1990s, the National Emergency Number Association (NENA) was publishing its own “how-to” manuals to train spatial analysts and planners the basic techniques of house numbering in rural areas (Lucy, 1995). The establishment of a systematic house numbering plan was deemed essential: “The proper addressing of the community may very well be the single most important part of a complete [E9-1-1] system” (Lucy, 1995: 3). The economization of time in “emergency” situations was used as the primary justification for “proper addressing,” and in post-9/11 America, this demand has only heightened as the state of emergency, to paraphrase Hardt and Negri (2004), has become the rule rather than the exception. The renewed interest in systematic house numbering is a major component to the construction of the American “homeland” (i.e., not only is it deemed necessary by the security apparatus of the state to clearly demarcate territorial boundaries and regulate human movement across international borders, the “homeland” itself is increasingly being viewed as in need of greater “internal” spatial legibility).

Much of the rhetoric supporting new address systems stresses the importance of locating citizens in emergency situations of life and death, yet NENA acknowledges that such systems also greatly enhance the government’s ability to collect taxes, make jury lists, and conduct census enumerations (Lucy, 1995). Businesses and corporations also have a large stake in constructing uniform house numbering systems in rural areas. When trying to convince local communities to
make the switch from the rural route and box numbering system to a city-style addressing system, NENA recommends that one “selling point” to emphasize is the fact that commercial interests will “save hundreds to thousands of dollars [because] . . . when addresses are easier for them to find they save money” (Lucy, 1995: 3). Indeed, the rise of the geodemographics industry over the past few decades has depended greatly upon acquiring address data in order to monitor consumer behavior (Goss, 1995; Monmonier, 2002; Phillips and Curry, 2002). The techniques of geodemographic analysis—and thus the latest round of house renumbering—are used extensively for corporate marketing purposes and aggressive strategies of “neighbourhood targeting” (Harris et al., 2005).

The new addressing systems created to support E9-1-1 services now make up the abstract spaces of the “citified” rural landscape. This process of producing spaces of concrete abstraction in rural areas, however, has not gone without resistance. As Phillips et al. (2003: 343) point out, “there has been local opposition to addressing projects. This resistance is sometimes because residents oppose standardized addresses in principle, but more often residents simply resist changing their established address.” Local residents are often not consulted at all when it comes to designing new address systems. For instance, under the heading “Who Should Participate?” (Lucy, 1995: 4-5), NENA’s 9-1-1 address system manual recommends that local governments, utility companies, the Post Office, and emergency services should be included as “participants.” There is no mention whatsoever of including individual citizens, or citizens’ groups, directly in the decision-making process, despite the fact that it is supposedly their lives that are on the line. Instead, the
biopolitics of life and death is left to geo-spatial state technocrats whose full-time job is constructing the geo-coded world.

This chapter has attempted to situate the current practice of house numbering and geo-coding within its historico-geographical context. The next chapter explores the contingencies and contradictions of rationalizing the landscape by providing a detailed historical account of house numbering in the gridded spaces of the Empire City.
The fact is that abstract space contains contradictions, which the abstract form seems to resolve, but which are clearly revealed by analysis . . . . the knowledge to be derived from analysis extends to the recognition of conflicts internal to what on the surface appears homogeneous and coherent—and presents itself and behaves as though it were.

— Lefebvre, The Production of Space (1991 [1974])

1. Introduction

One of the most characteristic qualities of urban governmentality is its near obsession with the ordered visuality of surface appearances and the perceived legibility of coordinated, spatialized inscriptions (see Chapter 3). The emphasis upon the psychological need for “identity and structure” (Lynch, 1960: 10) within urban environments has a tendency to depoliticize the spatial practice of ordering urban landscapes by shifting the analytic focus away from any serious consideration of the contradictions that make up the production of abstract space. Lefebvre’s (1991 [1974]; 2004) dialectical approach to urban theory opposes such attempts to find logical coherence in abstract urban spaces. “What is the relation of the logical and the dialectical (dialectic)?” asks Lefebvre (2004: 12-3), and he replies that “[t]he law of logic says: ‘No thought or reality without coherence’. The dialectic proclaims: ‘There is neither thought nor reality without contradiction’.” The present chapter follows
Lefebvre’s (1991 [1974]: 352) call to examine the “conflicts internal to what on the surface appears homogeneous and coherent” in the production of abstract spaces.

A useful feature of dialectical thought is its insistence on analyzing the world in terms of “processes” rather than fixed and frozen “things” (Lefebvre, 1968 [1940]; 1991 [1974]; Harvey, 1996). This is in stark contrast to positivist ontologies, which generally view space as an “empty container” within which a fixed number of “things” can be categorized into a logical “order.” More often than not, however, it is just such a positivist conception of spatiality that has informed governmental rationalities of the urban, thereby reshaping urban spatiality itself so as to better conform to the world of “things” conceptualized by positivist ontology. Foucault’s theorization of governmentality (as discussed in Chapter 2) problematizes the obviousness of such governmental ontologies as well as their mode of operation, yet in my view it does not adequately examine the contradictions of spatial ordering as a practice.

As Lefebvre argues, abstract space is not as “rational” or “coherent” as its apologists would have us believe. A dialectical conception of the production of space does not view urban landscapes as coherent finished products but instead conceives of them as always in the process of becoming. As Harvey (1996: 261) nicely puts it:

The process of place formation is a process of carving out “permanences” from the flow of processes creating spaces. But the “permanences”—no matter how solid they may seem—are not eternal: they are always subject to time as “perpetual perishing.” They are contingent on the processes that create, sustain and dissolve them.

When conceptually abstracted from the contingent processes of historical transformation, abstract space appears as a “thing” (or structure) that can be subjected
to “logical” evaluation, yet this reification of urban space does not adequately account for the contradictions of spatial permanences.

The current chapter offers a case study of the contradictory process of rationalizing the landscape by critically analyzing the spatial practice of street and house numbering in Manhattan. Chapters 4 and 5 provided a preliminary exploration of the spatial history of street and house numbering in the gridded cities of the United States. Such an approach to examining the production of abstract space—focused, as it is, on multiple local contexts within an urban network—has a tendency to emphasize breadth over depth in understanding the rationalization of geographical space. There are clear benefits to this approach in terms of generalization as well as analyzing reoccurring socio-spatial patterns and processes. However, such an analysis lacks the specificity that can be obtained more adequately through a detailed investigation of the spatial politics of constructing a “space of concrete abstraction” in one particular city over an extended period of time.

Few have considered the spatial practice of house numbering as an important element in the production of abstract space in Manhattan (Hoffmann, 1937; Isaacs, 1940; Henkin, 1998). In the sections that follow, I trace the history of street and house numbering in Manhattan from its inception in the late eighteenth century to the present. Section II examines the history of house numbering in Manhattan during the late eighteenth century and throughout the nineteenth century. In Section III, I continue my analysis into the twentieth century and explore the contested and contradictory nature of numbering the New York City landscape. Section IV addresses the issue of vanity in Manhattan’s geo-coded world by examining various
conflicts that arose regarding the practice of assigning “vanity addresses” (that is, addresses personally requested by an individual or real estate developer to enhance the owner’s social prestige and the economic value of real estate).

It is important not to simply treat governmentality as a monolithic force applying its will upon a passive population. Multiple governmental agencies, individual property owners, and large corporations all had a stake in the ordering of Manhattan’s street address system, and various governmental agencies collaborated and contested each others’ decisions. It is here where we find a set of competing conceptions of what constitutes the most “rational” way to rationalize the urban landscape—or, rather, the “moment” when competing governmental rationalities collide over the production of abstract space. Recognizing such conflicts and contradictions leads to an acknowledgement of the “messiness” of implementing governmental programs (O’Malley et al., 1997). Lastly, Section V concludes by considering the larger theoretical implications of the preceding analysis.

In this chapter, I illustrate how the political economy of constructing a system of street addresses within the context of capitalist social relations was contradictory in a number of ways. Manhattan’s street address system has continuously been reconfigured since the late eighteenth century. As we shall see, there were numerous attempts to standardize the system in order to secure a means of constructing a spatial “permanence” to stabilize the city’s spatial regime of inscriptions (so that city officials would not have to constantly alter the system with each change in the built environment). In previous chapters, I have argued that this process facilitated the economization of time and, thus, the circulation of commodities. Yet, this chapter
seeks to complicate my previous narrative by exploring the contradictions within capitalist logic itself as it relates to ordering a city’s street addresses.

Corporate property owners often care more about the social prestige of their own address than they do about the system as a whole.33 To the extent that city government accommodates each individual property owner’s request to acquire a more prestigious address, this may conflict with the politico-economic desire for standardization. How such issues get resolved is, of course, not a deterministic process but contingent upon the politics of governmental administration. One should not automatically assume, therefore, that state power (or capital) will always seek the standardization of urban space over other competing projects of capital accumulation. These contradictory logics are best examined through a theoretically-informed case study rather than abstract theorization alone.

Another contradictory feature of the production of abstract space (at least as a concrete specificity) is the disjuncture between its apparent status as a finished product of coherence, on the one hand, and its continuous “dissolution” over time due to the impossibility of universal “maintenance,” on the other. While it may not be that difficult for an archaeologist to maintain a gridded spatial regime of inscriptions at a relatively small excavation site (over a relatively short period of time), the bureaucratic challenge of maintaining a city-wide grid of inscriptions would be near impossible if left to city inspectors alone. As we shall see, one of the main strategies taken has been to require self-identification according to specific criteria, which

33 Of course, the symbolic value of a prestigious address itself can only be considered in its relation to the system as a whole (and necessarily depends upon that system), yet in any particular case, the contradiction between individual self-interest and city-wide coherence is often a source of major contention.
leaves local officials with the task of enforcement (which is itself time-consuming) rather than the actual practice of spatial inscription itself. Enrolling the “objects” of government in their own spatial objectification and identification is central to the process of acquiring “consent” to the production of abstract space. This may appear to resolve the issue, thereby producing a coherent space; yet, as Harvey notes, the temporal has a way of contradicting the apparent coherency of abstract spatiality.

II. The Making of a Spatial Regime of Inscriptions in the Empire City

War gave rise to the emergence of house numbering in the Empire City. When the British captured Manhattan Island during the American Revolution, they began numbering houses across the Island to establish military control of the occupied territory (Trow’s New York City Directory, 1878: vii). Prior to the war, the New York City population relied chiefly on shop signs, descriptive designations, and local familiarity when it came to navigating through the city’s streets, which were then concentrated at the southern tip of Manhattan. As late as 1774, few of Manhattan’s streets even had permanent street signs posted at intersections. On June 16, 1774, the New-York Journal published a letter, signed under the initials of “N.T.,” which praised city officials for passing a law the aim of which was “affixing the names of the streets at every corner.” While taking “great pleasure” in the prospect of such a municipal improvement, the author charged the “painters who undertook to paint the

34 I have yet to find any evidence that house numbering occurred in Manhattan prior to the Revolutionary War. Trow’s Directory of 1878 specifically states that the practice was introduced by the British during the war-time occupation of the island.
Figure 6.1: An original milestone first erected in 1769 on the Island of Manhattan (New York Historical Society Quarterly Bulletin, 1924)

letter boards” with neglecting to fulfill the duties of their contracts. Street signs had been posted along a number of streets where one of the city’s influential Aldermen lived at the time, yet “the rest of the city” was “wholly neglected” (N.T., 1774). The issue of constructing a comprehensive system of street signs proved to be a significant challenge to municipal authority over the urban streetscape well into the nineteenth century (Henkin, 1998).

During the pre-Revolutionary period, the municipal government had already inscribed a numerical system of milestones at intervals on Manhattan Island, marking the distance from the old City Hall at the corner of Nassau and Wall Streets (Figure 6.1). Measured and laid out in 1769, this system of milestones provided a spatial
frame of reference for local inhabitants by literally inscribing the authority of municipal power into the landscape as a metric to orient the city dweller’s mental map towards the local center of governmental power. After the British introduced house numbering during the Revolutionary War, the local city authorities continued the practice in order to facilitate the administration of population and property in the city.

On December 2, 1793, a group of residents on Partition Street petitioned the Common Council to authorize the “numbering of Houses” along their street, which was referred to the Committee for Streets and Roads (Common Council of the City of New York, 1793-1801: 52). By the end of the month, the Street Committee reported to the Common Council that a uniform set of rules be devised not only for Partition Street but for all streets in the city. The Committee’s Report on house numbering, which was adopted by the Council on December 30, 1793, established the principle of separating odd and even numbers on opposite sides of each street. This proposal was in sharp contrast to the current state of affairs at the time, where in many cases the same number was given to multiple houses on the same street (Hodge et al., 1789: 144).

The British had not strictly followed the odd/even rule; rather, they had often numbered houses up one side of a street and then down the other side (Hoffmann, 1937; Isaacs, 1940). The lack of street signs posted at the time likely explains why the same number could be found several times along one given street. To clearly distinguish one street from another, the Street Committee required that “a Board be put up at each end of every Street with the Name of the Street and an Index or hand
pointing towards the Street painted thereon” (Common Council of the City of New York, 1793-1801: 57). Houses were to be numbered in sequential order following the odd/even alternation along each street, which only seemed practical if the streets themselves were designated by street name signs.

The Report further recommended that one of the city’s surveyors “be employed to make the numbers on the Houses with Chalk and notify the Occupants thereof and a Painter to mark the number with Paint on the front of the House near the Door” (Common Council, 1793-1801: 57). Each resident was to be given the opportunity to “put up the number at his or her own expence” so long as this occurred within twenty days of the governmental notice (Common Council, 1793-1801: 57). The Committee’s Report was approved by the Common Council, and three of the original Committee members (Isaac Stoutenburgh, Theophilus Beekman, and Garrit Harsen) were chosen to serve on another Committee to ensure that the Report was carried out. The Report appears, for the most part, to have been executed as planned: Evert Bancker Jr. was hired to number the houses, Isaac Terboss painted and erected the numbers and street names, while William J. Elsworth was paid for providing tin plates for the house numbers (Common Council, 1793-1801: 82). The Report of 1793 laid the foundation for the construction of a spatial regime of inscriptions that would eventually incorporate the entire Island of Manhattan in a grid of concrete abstraction.

During the 1780s and 1790s, the Common Council initiated a process of northward expansion by conducting surveys of the public Common Lands to the north of the city center (Frank, 1955). In 1785, the same year that the U.S. Rectangular Survey System laid out the western territories as a giant “materialized” coordinate
grid, the city of New York hired Casimir Goerck to survey the Common Lands into a rectilinear grid of property lots to be sold or leased to individual residents as a source of revenue for the municipality. A decade later, in 1796, Goerck was hired again to re-survey the Common Lands in order to straighten the cross streets and the three main north-south arteries—then known as East, Middle, and West Roads—which later became the basis for Fourth, Fifth, and Sixth Avenues of the Commissioners’ Plan of 1811. I have discussed the Commissioners’ Plan and the Manhattan grid at some length elsewhere (Rose-Redwood, 2002), and so I will not repeat myself here.

What concerns us in the context of this study is that the Commissioners’ Plan of 1811 laid the Island out as a grid whose streets and avenues were numbered in sequential order from south to north and east to west, respectively. In this way, the Manhattan landscape was converted into a “material replication” of the Cartesian coordinate system. By the mid-nineteenth century, the city had expanded northward to approximately 42nd Street. During the second half of the century, however, urban growth was considerably uneven in a geographical sense, with the East Side expanding more rapidly than the West Side. At the close of the 1870s, urban development had extended to 125th Street on the East Side, yet only to around 59th Street to the west of Central Park (Moehring, 1981; Scobey, 2002). In the next chapter, I will come back to the question of real estate development on the Upper West Side as it relates to the renaming of West Side avenues during the 1880s and 1890s. In the remainder of the present chapter, however, my main concern is tracing the history of street and house numbering in Manhattan.
In the years following the adoption of the 1793 Report, the city approached the issue of house numbering on an ad hoc, street-by-street basis. The Street Commissioner or the Superintendent of Repairs were generally given official authorization to number houses along specific streets. Within less than a decade, the local editor of the city’s directory, David Longworth, was already complaining about the state of Manhattan’s house numbering system. “There are many streets that are not numbered,” he noted, “and others so imperfectly as to make it impossible, to furnish any accurate information of the residence of their inhabitants” (Longworth, 1801: 321). Nearly twenty years later, the very same criticism was made by David Longworth’s son, Thomas, who had taken over as editor of his father’s directory business. The younger Longworth (1820) exclaimed that “in many of the streets the numbering is so very irregular as to be of no use.”

In 1825, the *New-York Evening Post* published an editorial posing the following rhetorical question: “Is it not a reproach to the public authorities of New York, that neither are the great majority of houses, designated by numbers, nor one in ten of the streets pointed out by name, to the passing stranger” (“Numbering of Streets,” 1825)? As the city grew during the nineteenth century, the numbering of houses became more problematic and often could not keep pace with the shifts in real estate development and the residential geography of the city. This is not a simple story, then, of the local state successfully imposing a legible spatial order upon the landscape. The “things” (i.e., buildings) to be enumerated were themselves part of the dialectical process of creative destruction, which led to considerable contradictions by the standards of positivist epistemology alone. As various scholars have noted,
Manhattan’s built environment underwent tremendous change during the nineteenth century, with buildings constantly being torn down to make way for new waves of construction (Page, 1999; Scobey, 2002). This process of “creative destruction” made it quite difficult for city officials to maintain a systematic regime of house numbers in the city. The piecemeal manner in which the city authorities numbered existing buildings resulted in either a chaotic patchwork of numbers along the city’s various streets or a lack of numbers altogether. This was especially the case before the advent of what I called “theoretical” house numbers in Chapter 5 (e.g., the Philadelphia System of a hundred numbers to a block or the equal interval method based on street frontage).

In antebellum New York, it was not uncommon for the city to renumber houses in certain streets several times within a period of only a few years, which often angered residents as well as the city directory publisher.35 By the end of the 1820s, many streets remained irregularly numbered. “Much irregularity and confusion exist in the numbering of houses in some streets,” explained Thomas Longworth in the 1829 issue of the city directory. He went on to insist that such confusion was the

35 An article in The Evening Post on July 19, 1839 summed up the public frustration with such renumbering practices: “The frequent changes which take place in the numbering of streets are a great inconvenience.—They are often made without notice to the occupier of a dwelling, the plate containing the number over his door is changed without his knowing it, so that he who goes to bed at No. 50 in his street, may wake up the next morning at No. 100. A friend of ours living in the Third Avenue has been much annoyed in this way. Two months ago his number was somewhere between 150 and 200. It was altered to some fifty numbers lower, and discovering the fact he put up a plate accordingly. Yesterday he purchased some goods and ordered them to be sent to his number at eight o’clock this morning. They did not arrive and while he was standing at his door wondering what it could mean, a casual look at the top of the door showed him that the officers of the corporation had changed the number of his house within the last twenty-four hours, putting it some twenty below what it was before. At this rate, he fears, they will shortly leave him without any number at all. Seriously, however these proceedings are very inconvenient to householders. They occasion confusion and mistakes in the delivery of letters and packages, and perplex strangers who are looking for the residence of their acquaintances in town. We have been told that there is a law of the Common Council requiring that these changes should be made only at a certain time of the year. They should, we think, always be made in the months of May and June, as the Directory is published in July” (The Evening Post, 1839).
result of “queer notions” and found it virtually “hopeless to expect a consistent plan to be adopted in reference to this measure” (Longworth, 1829: 641-2). The numbering of houses along Wall Street, in particular, was singled out by Longworth (1829: 642) as having been reduced to “an intermingling variety and a regular state of beautiful confusion.” It was not until a decade later that the municipal government enacted a house numbering law that would surpass even the 1793 Report in its vision of re-ordering Manhattan’s chaos of numbers inscribed upon the cityscape. Yet, as we shall see, even this new plan would come with its own contradictions.

The irregularities in the city’s early attempts at numbering houses can, at least in part, be attributed to the irregular layout of streets in lower Manhattan. As the rectilinear streets and avenues of the grid plan were beginning to be developed during the 1830s, the city adopted a new house numbering law to be applied to all cross-streets north of 13th Street. In 1838, Mayor Aaron Clark approved a local law, which for the first time officially partitioned the city into an East and West Side, with Fifth Avenue serving as the great dividing line (“House Numbering,” 1838). All cross-streets were to be numbered starting with No. 1 on either side of Fifth Avenue and were then to extend sequentially to each river (presumably following the odd/even distinction from 1793). The law explicitly stated that streets were to be described according to their position with respect to Fifth Avenue (e.g., East 13th Street and West 13th Street). From the early 1840s onward, city directories referred to cross-streets according to their East/West designations. Significantly, however, the law of 1838 did not set any guidelines for New York’s north-south avenues, only for its cross-streets. This issue would arise a century later, when city and federal officials
unsuccessfully attempted to systematize the numbering of houses along the city’s avenues during the late 1930s and early 1940s (see Section III).

Between 1846 and 1849, many of Manhattan’s streets were renumbered. In 1848, the Common Council ordered that the renumbering of houses should only take effect in the month of April of each year, since May 1, or “May Day,” was when leases ended and canvassing began for the new city directory shortly thereafter. During the second half of the nineteenth century, a significant proportion of the population changed residence on an annual basis, and city directory canvassers attempted to keep track of these changes. “The whole city is like a huge kaleidoscope which annually dislocates itself and forms a new figure,” wrote the editor of *Trow’s New York City Directory of 1868-9*. He longed for the day when Manhattan—as a finished product—would be completely built up so that “the business habits of the people shall have crystallized themselves into permanent conditions.” Only then, he continued, would it “be a comparatively easy task to compile the City Directory.” Until that point, however, New York’s residents would remain as “migratory as Arabs.” In the meantime, he suggested, the imperfect city directory would do its best at “keep[ing] things in order for the general public” (*Trow’s New York City Directory*, 1868: 4-5). Here, again, we see a continuous attempt to fix, or “crystallize,” a spatial order of “things” from the dynamic and contradictory processes of capitalist urbanization.

As I demonstrated in Chapter 4, the city directory business played a major role in the numbering of houses in American cities during the nineteenth century. I also maintained that house numbering and city directories were strategies for the...
economization of time—that is, ways in which to accelerate the rate of capital circulation—as well as the governmentalization of urban spatiality. Such claims, of course, should be subject to scrutiny. We might suppose with some justification, for instance, that city directory publishers inflated their own importance with self-congratulatory praise for their endeavors in order to boost sales and increase subscriptions.

Yet, surely there was more than mere rhetoric to the following claim made in Trow’s New York City Directory (1878: iii-iv):

This same volume [i.e., the city directory] aids the officer of justice to apprehend the culprit or to obtain the witness, brings instantly the friend to the presence of the friend he needs, increases the usefulness of the post-office and the telegraph, facilitates the operations of commerce, and finally furnishes a fascinating history of local progress and social development, and an interesting and trustworthy body of vital statistics. Let any one who has never thought what a Directory is, try to fancy what a city of more than a million souls would be without one, and what a paralysis of social and commercial communication would be induced by the abrupt cessation of an enterprise like the Trow New York City Directory... The Directory being one of the great enterprises close of kin to the railroad, the telegraph, and the steamship, for the saving of time—time in a highly organized community being indeed money—it follows inevitably that its compilers have assumed a great responsibility. A newspaper may recklessly invent, it may make statements that though substantially correct, are not absolutely accurate, it may be imposed upon by an unfaithful or dishonest subordinate, or it may suffer from a misapprehension, or a typographical error, but in all these cases allowance will be made, or a remedy easily can be devised. Not so, however, with the Directory. It must be nearly perfect, or it is adjudged worthless.

Whether or not historians and historical geographers should take such statements at face value remains open for debate. It is interesting to note, however, that most social historians and urban historical geographers themselves rely heavily on city directories as a “trustworthy body of vital statistics,” including street addresses, when it comes to narrating the social history of American cities. Likewise, by the latter quarter of the
nineteenth century, the federal government recognized the importance of city
directory canvassing as an indispensable form of urban-geographical knowledge
production.

During the early 1880s, the U.S. Department of the Interior, which was in
charge of taking the national census every ten years, contacted the publishers of
*Trow’s New York City Directory* for their advice as to “the most efficient means of
securing information” for the federal census. The directory publishers cooperated
fully with the federal authorities and “cheerfully placed the government in possession
of knowledge acquired during a period extending over thirty years” (*Trow’s New
York City Directory*, 1880: iv-v). City directories were also routinely used by city
officials to supplement their own recordkeeping practices. It is little wonder, then,
that those who wished to evade the gaze of the sovereign state (whether it was to
avoid taxation, jury duty, and so on) would refuse to give their name and address to
the privately-financed city directory canvassers (see Chapter 4).

New York’s directory publishers continuously charged the city’s wealthy
elites with a “sublime indifference” in providing accurate information to directory
canvassers and lambasted “the gross stupidity of their servants” (*Trow’s New York
City Directory*, 1880: iv). As discussed in Chapter 4, servants were often the chief
source of information for most U.S. city directories at this time. On the other hand,
working-class residents and people of color themselves were often systematically
excluded from directories, and thereby excluded from this particular type of
representation of the “public sphere,”*36 in New York City. As directory publisher

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36 It is worth noting that Habermas’ influential text, *The Structural Transformation of the Public
Sphere* (Habermas, 1989 [1962]), devotes considerable attention to the role of newspapers in
Thomas Longworth (1829: 638) arrogantly professed, “the names of laborers, colored people, persons in low obscurity who rent tenements by the week or month, may be excluded without impairing the utility of the work.” Such racist and class-biased procedures of exclusion were cloaked in the guise of a parsimonious objectivity.

The city directory was to be a compilation of objective “facts” of city life. As a later New York directory editor insisted, it was “the object of the Directory to give the sternest facts, and to repress all flights of the imagination” (Trow’s New York City Directory, 1858: 4). Yet, the irony was that the very basis of the directory—that is, the spatial regime of inscriptions that made up the city’s house numbering system—was itself a construction of the governmentalized imagination imperfectly inscribed across an ever-changing landscape that never “crystallized” once and for all but was instead always in motion.

When the city legally divided the Island of Manhattan into East and West Sides through Fifth Avenue in 1838, this appeared to provide a “rational” solution to the perplexities that confounded the city’s numbering system downtown. However, both systems still shared one fundamental contradiction: they were each based on the procedure of numbering existing buildings as distinct “objects” without considering what would happen when new buildings were constructed in between existing structures. When Philadelphia devised the decimal system of numbering in the early 1860s (see Chapter 5), New York City’s governing authorities quickly saw its utility constructing a public sphere, yet he largely ignores the way in which city directories were also formative in the selective production of the public sphere during the nineteenth century. The absence of a discussion of city directories is also quite noticeable in Cohen’s otherwise remarkable book, A Calculating People: The Spread of Numeracy in Early America (1999 [1982]).
with respect to stabilizing the city’s house numbering system along the cross-streets of the grid.

As early as February of 1861, the Board of Councilmen adopted an ordinance that applied the Philadelphia System of designating one hundred house numbers per block (regardless of the existing number of built structures) on all of the cross-streets north of 9th Street. The ordinance was then adopted by the Board of Aldermen on October 14 of that year and signed by the Mayor three days later (“Of Numbering the Streets,” 1866: 264-5). Again, the ordinance only applied to the city’s cross-streets and not its avenues, yet this was a major shift in conceptualizing and operationalizing the practice of house numbering in New York City. Since Fifth Avenue marked the “origin” of this new numbering system as before, it was not possible to coordinate the cross-street house numbers with the city’s north-south avenue numbers. In other words, whereas in Philadelphia the decimal system was designed so that 3rd and 4th Streets would have house numbers between 300 and 400, this was not an option in Manhattan unless the city had shifted the East/West dividing line to the east of First Avenue instead of retaining it at Fifth Avenue. What it did do, however, was indicate how many blocks away from Fifth Avenue a given house was located.

The general system of 1861 has been, for the most part, retained until the present with one principal exception. In the mid-1880s, West Side property owners succeeded in officially changing the house numbering scheme along all cross-streets west of Central Park from 59th Street to 110th Street. Instead of starting at Fifth Avenue, houses were to be numbered from Eighth Avenue, or what would become Central Park West. I will explore this issue a bit further in the next chapter, yet suffice
it now to say that real estate speculation and a concern for property values played a significant role in this process of renumbering cross-streets on the Upper West Side.

III. The Contradictions of Urban Governmentality in Twentieth-Century New York

By the turn of the twentieth century, the practice of numbering houses had become part of the taken-for-granted “order” of everyday life for residents and bureaucrats alike in most American cities, including New York. The majority of cities had adopted either the Philadelphia System or a related equal interval method of house numbering (see Chapter 5). It would appear, at first glance, that the “structures” of legibility had at last been established and “order” finally secured. Yet, as Harvey (1996: 261) rightly argues, the spatial “permanences” that are constructed to constitute rationalized, abstract spaces are “always subject to time as ‘perpetual perishing’. They are contingent on the processes that create, sustain and dissolve them.” The temporal dissolution of Manhattan’s spatial regime of inscriptions has been ignored by most scholars who emphasize the triumph of Cartesian “order.”

Manhattan’s grid of cross-street house numbers may have been “decimalized” during the 1860s, but the numbering of houses—and the enforcement of existing city house numbering ordinances—was indeed subject to contestation, neglect, and dissolution throughout the twentieth century. After the Greater City of New York was consolidated in 1898, the city was divided into different boroughs and each elected its own borough president. The duties of the borough presidents changed a number of times during the twentieth century, yet the authority over house numbering eventually
became one of their chief responsibilities (via the borough topographical offices) and remains so today. The City Council, however, retained the power to officially name streets throughout the city.

Although the Borough President’s Office was in charge of determining official house numbers in Manhattan during the twentieth century, individual property owners themselves were responsible for actually inscribing the numbers upon their buildings, which I earlier described as the spatial practice of self-objectification or self-identification. Article 10 of the city’s new Code of Ordinances required that the “owner, agent, lessee or other person in charge of any building . . . shall cause the proper street number or numbers of such building to be displayed . . . in such manner that the street number or numbers may at all times be plainly legible from the sidewalk in front of such building” (The Code of Ordinances of the City of New York, 1918: 433). Violations of Article 10 were common, however. The Division of Encroachments and Incumbrances, of the Manhattan Borough President’s Office, commonly reported that a “great many premises were found not numbered, or on which the numbers were illegible” (Curran, 1921: 51). In most cases, property owners notified by the city would eventually comply with the ordinance, but those who did not were subject to the payment of fines by the Bureau of Penalties in the municipal Law Department.

In 1929, there were 11,279 inspections and notices sent out by the Borough President’s Office for house numbering violations, yet only 140 were referred to the Bureau of Penalties (Miller, 1929). A year later, 6,438 violations were reported, with a total of only 78 cited for further non-compliance (Miller, 1930). In the years that
followed, the number of reported violations varied yet remained a persistent issue with which municipal officials and the postal authorities had to contend. The total number of violations must have been much higher than those reported, since city officials only had enough time and resources to inspect about 10% of the approximately 100,000 buildings in Manhattan (Reinitz, 1929). It is also unclear whether those cases that were not reported to the Bureau of Penalties for further non-compliance had resolved the issue or if the borough simply did not have the resources to press charges against all reported violations.

For instance, between 2,500 and 11,000 violation notices were sent out each year up until 1935, with around thirty inspectors hired to survey the Borough of Manhattan. The number of violation notices that were sent out declined markedly by the early 1950s, to approximately 50 notices each year. This drop in reported violations, however, had nothing at all to do with the actual number of existing violations but simply from the fact that “[i]nspectors retired, died, or went into more lucrative fields, and weren’t replaced” (Esterow, 1952: 29)! In 1957, Borough President Hulan E. Jack began to enforce the city’s house numbering regulations again and sent out 20,000 violation notices (“House-Number Warning,” 1957). 37

Although house numbering remained a municipal affair in twentieth-century New York, the federal postal authorities also played an increasing role in encouraging residents to correctly number their houses and were also regularly consulted by the Borough President’s Topographical Office on a case-by-case basis when the city numbered and renumbered buildings in Manhattan. In the early 1920s, postal

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37 Based upon the limited survey conducted at the time, 20% of surveyed houses lacked numbers altogether and 80% did not comply with existing regulations.
authorities began a national campaign to force urban and rural Americans to number their houses and erect mailboxes on their properties to facilitate home delivery. On November 16, 1921, the Postmaster General and Assistant Postmaster General traveled to New York City from Washington, D.C., for a conference “behind closed doors” with the Postmaster and various other officials from the New York Post Office. One of their main concerns was, as the *New York Times* reported, to acquire “the co-operation of the public in providing receptacles for mail and displaying house numbers” (“To Hurry Mail Delivery,” 1921: 13). They even issued a public statement explaining that the lack of correctly numbered houses caused considerable delay and inefficiency in the delivery of mail.

A year later, the *New York Times* ran a story by the title, “ Warns City Residents to Put Up Mail Boxes: Postmaster General Says That if Farmers Can Do It So Can Dwellers in Big Towns” (1922). Paraphrasing the Postmaster’s statement, the *Times* opened this article by insisting that “[i]f 6,500,000 farmers all over the United States have been compelled to put up mail boxes on their front doors at their own expense, the city dweller should not protest against having to follow this example.” While postal officials technically had no legal authority over the numbering of houses in Manhattan, they could always threaten to refuse delivery if residents did not comply with postal regulations. This was, in large part, what led the Borough President’s Office to make a point of consulting with postal officials before designating new street addresses.

As noted earlier, by the end of the 1920s, city authorities continued to send out thousands of violations each year. It was estimated that approximately half of all
complaints of house numbering violations reported to the Borough President’s Office came from postal employees who had had trouble delivering mail to particular buildings with incorrect or missing house numbers (Reinitz, 1929). The older sections of the city were reported to have the most violations. Some went so far as to suggest that “the modern knight errant” in search of a house number in the city reenacted “[t]he proverbial quest for a needle in a haystack,” while it was also noted that “cynics have even proposed the employment of New York’s detective force in the interests of the harried public” (Reinitz, 1929: 148) (Figure 6.2).

In addition to the difficulties with enforcing the city’s house numbering ordinance, considerable confusion arose over how to locate an address along
Manhattan’s north-south avenues. There had been calls as early as the nineteenth century to standardize the avenue numbering system, yet the laws of 1838 and 1861 had only applied to Manhattan’s east-west cross-streets. Elaborate devices were made to aid New Yorkers in the “knight errant” quest to “unravel” what the New York Times called “one of the most baffling mysteries known to man—where to expect to find a given house number on a north-south avenue in Manhattan” (“A Manhattan Reform,” 1952: 28). Most avenues were numbered from south to north, but since not all avenues began at the same downtown cross-street, house numbers did not match up from avenue to avenue from downtown to upper Manhattan (nor did they follow the decimal system of one hundred numbers to a block). In some cases, especially along Central Park, the odd/even rule was not followed either.

There was a coordinated attempt to rationalize the house numbering regulations for Manhattan’s avenues during the late 1930s and early 1940s. This effort eventually failed to achieve its desired goal, but the controversy that arose clearly demonstrates the conflicting interests and contradictory logics that characterized the spatial politics of rationalizing the Manhattan landscape. On March 14, 1939, the New York City Postmaster Albert Goldman gave a speech to the Lions Club at a luncheon held at the Astor Hotel. He urged the city to adopt a new house numbering plan for its north-south avenues and attacked the current system as “outworn and obsolete” and speculated that it had been devised “without giving the matter much thought” (“Address Reforms Asked By Goldman,” 1939: 20). Goldman proposed a system of hyphenated numbers, where the first set of numbers corresponded to the nearest cross-street south of each building and the second set
were the specific numbers for each house on the block (with odds on the west side and evens on the east side of each avenue). For instance, an address of “48-01 Fifth Avenue” would be the first house located in between 48th Street and 49th Street on the west side of the avenue. The plan was to apply to all avenues above 8th Street.

In the months that followed, Goldman’s plan gained the support of Manhattan Borough President Stanley M. Isaacs as well as many influential groups and agencies in the city (including the Bowery Savings Bank, the Chamber of Commerce, the New York Steam Corporation, the Postal Telegraph Company, the Railway Express Agency, the United Parcel Service, and various department stores). The city’s Department of Housing and Buildings as well as the Tax and Police Departments also endorsed the plan. When Borough President Isaacs announced on January 10, 1940, that a nonpartisan bill would shortly be introduced to implement Goldman’s proposal, the New York Times made the outcome seem almost inevitable that a resolution with such “wide backing” would pass through the City Council easily (“Council Ready to Speed Change Of House Numbers in Manhattan,” 1940).

However, when the Council Committee on Parks, Playgrounds and Traffic held a public hearing on the renumbering proposal, there was strong opposition from the Fifth Avenue Association’s spokesperson, Captain William Pedrick. He claimed that such a change would be a great burden on Fifth Avenue businesses, since they would have to buy new stationery, revise their business records, and lose much of the symbolic capital that had been invested in establishing their specific Fifth Avenue address as a form of status and prestige. Pedrick also reminded the Committee that Fifth Avenue businesses contributed around 25% of Manhattan’s total tax revenues,
so their interests should be given considerable weight when it came to renumbering the city’s avenues.

By contrast, Isaacs argued that “[t]here is no sanity in the present numbering system,” and he went on to add that finding an address on one of Manhattan’s avenues required that one “carry an index card around with you.” “It is simply historical nonsense,” declared Isaacs, “. . . Of course you will find opposition on the part of people who think they have the right to patent numbers, and because of a selfish interest think they have the right to stop a reform which is for the benefit of all the citizens.” Likewise, Postmaster Goldman defended his proposal and displayed a chart illustrating the efficiency of the plan to the Committee. He pointed out that Brooklyn and Queens already had similar systems and that most major U.S. cities had some type of systematic numbering plan. “Apparently the whole method of numbering was left to chance,” he noted of Manhattan’s avenue house numbers (“Proposed Change in Numbering Of Buildings Fought at Hearing,” 1940: 23).

A week later, Goldman wrote a letter to the editor of the New York Times claiming that “the vast majority of the residents of our city” favored his renumbering plan. He insisted that “the interests of the entire community in this matter should be the basis of action rather than the objections urged at the hearing, which mostly represented individual opinion” (Goldman, 1940: 21). The Council Committee, however, did not approve the plan and instead the Council passed another bill giving the borough presidents the authority to enforce already existing regulations. As the Times reported, Borough President Isaacs “voted for the bill after complaining that the earlier plan for renumbering Manhattan thoroughfares north of Eighth Street had
been ignored” (“Council Bill Rejected,” 1940). A later observer remarked that social “inertia” was the “rock on which all attempts at reform have foundered . . . and the fact that people resist change because numbers are permanently attached to buildings, appear on a large supply of letterheads and other printed matter, or are a matter of pride, tradition and business prestige” (“A Manhattan Reform,” 1952: 28). The Goldman renumbering controversy is a good illustration of the contradictions of spatial rationalization and the conflicts that often arise over what constitutes the “rational” when it comes to formulating governmental rationalities of the urban.

IV. The Place of Vanity in a Geo-coded World

As the debate over renumbering Manhattan’s avenues shows, there is more to a street address than simply its utilitarian functionality within a governmentalized spatial regime of inscriptions. The prestige associated with certain addresses, such as Fifth Avenue, is commonly used as a form of what Bourdieu (1977) calls “symbolic capital.” In some instances, a specific address acquires a social or business reputation based upon the perceived activities occurring in that particular section of the city. In other cases, individual property owners as well as corporations have requested that municipal officials change their address to a more *prestigious-sounding* designation, or to an already established “reputable” address, in the hopes that the name alone will carry with it an element of symbolic importance. The latter are commonly referred to as “vanity addresses” by both the city authorities and the popular press. Vanity addressing is, in a sense, an attempt to spatialize the signification of prestige with the aim of creating symbolic capital.
The history of vanity addressing in the Empire City can be traced back at least to the 1820s. At that time, various property owners along certain streets replaced their street addresses with the more prestigious designation of “place” or “square,” sometimes without the official approval of the Common Council. In 1827, *Longworth’s City Directory* vehemently opposed this practice and complained that “a new-made pride may be tickled by what only serves to produce confusion.” The directory editor insisted that house numbers and street names (as opposed to the “injudicious mode of giving ‘nick-names’ to different parts of streets”) were the most effective means “for discovering the residence of an individual” (Longworth, 1827: 555, emphasis in original). By 1830, there were quite a number of such “nick-names” that were not officially sanctioned by the municipality, and *Longworth’s Directory* (1830: 672) rejected the use of these terms as “the ostentatious display of interested individuals.”

Longworth adamantly maintained that the use of place and square, instead of street, names went against “republican simplicity,” since it bestowed special privileges on a select few to the detriment and “confusion” of the many. He also derided the construction of what he called “places of exclusiveness” (Longworth, 1833: 685, italics removed). “We vain republicans,” Longworth (1838: 724, emphasis in original) later exclaimed:

> boasting of the simplicity of our institutions, making ourselves ridiculous at home and abroad, by a greedy appetite for mere nonsensical distinctions. Squares and places are the rage of the day, and we may expect to find some, still more arrogant, attempting a “monopoly” of both square and place . . . . the citizens of New-York display many evidences of this disordered taste. A man resides in this or that street; but places are for horses, cows, or pigs.
Longworth refused to acknowledge these “places of exclusiveness” in his Directory for a number of years, yet in 1841 he decided to “carry out an experiment” and included unofficial place and square names to see if it would boost his sales.

With more than a hint of sarcasm, Longworth (1841: 813, emphasis in original) made the following suggestion: “if there be any honour or dignity resulting from the adoption of the tag Place, it ought to be enjoyed by the citizens at large . . . it is therefore to be hoped that they [i.e., the Common Council] will cause the subject to be investigated, expunge the word street, and substitute the word place throughout the city—let us all have a place.” As we shall see in the next chapter, the renaming of streets as a means of creating “places of exclusiveness” continued throughout the nineteenth century, most notably with the renaming of the avenues on the Upper West Side.

Over the course of the twentieth century, the tradition of accommodating, and indeed encouraging, the vanity of real estate developers in the renumbering of Manhattan street addresses gained momentum, especially from the 1960s onward. One of the most widely publicized struggles over what can be seen as a vanity address, however, occurred in the 1920s (Alpern, 1984). The conflict arose when the One Park Avenue Corporation was constructing a new building between 32nd and 33rd Streets along Fourth Avenue. At the time, Fourth Avenue turned into Park Avenue above 34th Street, yet the One Park Avenue Corporation petitioned the Board of Aldermen to extend the Park Avenue designation down to 32nd Street, thereby giving them the address, 1 Park Avenue. The Board of Aldermen passed a resolution to this effect on April 22, 1924, which was then approved by Mayor John Hylan on May 3.
A number of the residents whose addresses were to be changed, most notably Martha Bacon (the widow of former Ambassador to France, Robert Bacon), backed by the Murray Hill, Fifth Avenue, and Park Avenue Associations, fought to overturn the resolution. Bacon, who had resided at the address of 1 Park Avenue for a number of years, led the struggle to rescind the Park Avenue resolution. The Park Avenue Association later made their views clear in a public statement in which they claimed that the One Park Avenue Corporation was “threatening to commercialize this famous thoroughfare” (“Business in Park Av. Brings More Protest,” 1926: 39). On April 14, 1925, the Board of Aldermen finally reversed its earlier resolution to extend Park Avenue, but Mayor Hylan then vetoed this new resolution, thereby reaffirming the new Park Avenue extension.

When James Walker became mayor of New York City in 1926, Bacon and the neighborhood associations lobbied the Board of Aldermen again to rescind the original resolution, with the hope that the new mayor would not veto it this time around. However, the resolution was defeated by a vote of 66 to 5 before it had a chance to cross the mayor’s desk. Bacon took the case to court and lost the initial ruling, yet the Appellate Division then overturned the decision and declared the Park Avenue extension invalid, stating that the “attempt to arbitrarily take away the house number of one citizen in order to give it to another is neither for the benefit of the public nor a proper exercise of the police power” (“Restores 1 Park Av. to the Bacon Home,” 1927: 21). The case then went to the Court of Appeals which reversed the Appellate Division’s ruling. The opinion held that although “the renumbering has caused inconvenience,” the Board of Aldermen was well within its authority when it
made the street name change (“Mrs. Bacon Loses Fight for No. 1 Park Avenue,” 1928: 1).

Although there were other hotly debated street name changes throughout the twentieth century (some of which I discuss in the next chapter), the issue of vanity addresses gained public attention again in the 1960s, when a growing number of corporate skyscrapers were given the designation “plaza” as part of their official street address (one of the earliest being One Chase Manhattan Plaza in the downtown financial district, which was completed in 1961). This was a direct result of the city zoning law of 1961, which gave developers an incentive to include open space (i.e., plazas) on the ground-level of their lots and in return the city eased height restrictions. By 1968, over half a dozen such “plazas” were created with the full support of the Manhattan Borough President’s Office (Whitehouse, 1968).

Plaza addresses were also perceived by some as carrying more prestige-value (symbolic capital) than common street names or numbers. “The plaza designation in the address,” explained Franklin Whitehouse (1968: R1) writing in the New York Times, “is considered by many builders to give individuality and a hint of luxury that might be lacking in a structure known by an ordinary street number.” The basic idea was that the symbolic capital invested in a more prestigious name might be converted into economic capital by boosting property values and enhancing the business reputation of a corporation (Bourdieu, 1986). By the mid-1980s, when David Dinkins was Borough President, the Topographical Bureau distributed vanity addresses as a deliberate strategy to reward real estate developers and corporations for locating in Manhattan (Lyons, 1988; Dunlap, 1990). A developer explained the craze for vanity
addresses by noting that it was “the newest and most successful gimmick in Manhattan real estate promotion—one that can be of enormous financial value when used in the right neighborhood” (as cited in Lyons, 1988: 434).

In 1988, the Director of the Manhattan Borough President’s Topographical Bureau, Anthony Gulotta, estimated that around one hundred addresses were changed each year. While vanity addresses may have been a boon to developers, and were encouraged by Borough President Dinkins, the New York City branch of the U.S. Postal Service as well as the Metropolitan Taxi Board of Trade were generally opposed to the practice. Postal authorities publicly criticized the out-of-sequence numbering that often resulted from vanity addresses, with the Penn Plaza complex near Madison Square Garden being the “worst offender” (Lyons, 1988: 434).

There were many conflicts between the Postal Service and the Borough President’s Office in the 1980s. This was especially true when the Borough President awarded an address to a building that did not have a main entrance on the street or avenue listed in the official address. For example, in 1987, Borough President Dinkins assigned the address 201 East 86th Street to a mixed-use building whose actual front entrance was on Third Avenue.38 However, 86th Street was one of the main cross-town thoroughfares at the time, which gave it a measure of distinction to those who had requested the change. What is interesting in this case is that it was a request not to replace a numbered street with a street name, but rather a question of deciding between two different numbers—86th Street or Third Avenue?—where one was seen as more distinguished and reputable than the other. This too can be seen as a

38 See File #2080 in the House Numbering Archive at the Manhattan Borough President’s Topographical Office.
“vanity address” because its assignment had everything to do with the maximization of symbolic capital in New York’s geo-coded landscape.

Before making the decision, the Borough President’s Office called on the Postal Service for its recommendation. The latter strongly opposed the measure and argued that it would be a great inconvenience since the delivery of mail was based on north-south and east-west route systems, which would be disrupted if a cross.street letter carrier had to deliver mail at the building’s entrance on Third Avenue (which was part of a separate north-south mail route). Borough President Dinkins went ahead with the change anyway. An internal memorandum39 to Dinkins from one of his staff members, Charles Williams III, dismissed the Postal Services’ objection and maintained that “mere administrative concerns” were not a justifiable “basis for denial of an otherwise legitimate address.”

This decision was consistent, Williams’ memo suggested, with the house numbering policy that Dinkins had agreed to at the beginning of his term as Borough President:

At the commencement of your term [referring to Dinkins], we discussed how best to implement and enforce this process. Taking into consideration the financial value to the developer of being granted a specific address, it was decided that to ensure fairness and prevent impropriety, address requests should be approved unless their exists a substantive basis for denial. This approach would eliminate discretionary decisions and thereby limit the possibility of abuse.

This policy basically amounted to a full-fledge embrace of vanity addressing as a matter of public policy (except in extreme cases where “the address desired was so misleading as to make it difficult to locate the building”). Interestingly, Williams

39 See Williams (1987) located in File #2080 in the House Numbering Archive at the Manhattan Borough President’s Topographical Office.
painted a very different picture when interviewed by the press. “When Mr. Dinkens [sic] took office,” Williams explained to a New York Times reporter, “we held a meeting and determined internally that changing addresses was not a gift that we should bestow indiscriminately.” He went on to note that “[w]e could either go easy or be very tough, and we decided to be very tough so the changes would not cause a great deal of confusion” (as cited in Lyons, 1988: 434). Williams’ internal memo to Dinkins cited above, however, belies the rhetoric of his public statement.

When Dinkins became mayor of New York City in 1990, the new Borough President, Ruth Messinger, decided to create tougher standards and criteria for awarding vanity addresses. The biggest criticism of previous practices was that accommodating the wishes of every developer led, in a number of cases, to out-of-sequence and confusing numbering schemes. “Addresses must be assigned with public safety and convenience in mind,” Messinger insisted, “[t]hey should be able to be easily found by everyone from ambulance drivers to postal workers to tourists.” She concluded, “I may be biased, but all of New York is still a prestigious address” (as cited in Dunlap, 1990: 21). In 1990, Chase Manhattan Bank requested the address Two Chase Manhattan Plaza for a building that was located close to the original One Chase Manhattan Plaza built in 1961, as discussed above. Before Messinger had made her decision, she received a letter40 supporting the address change from Deputy Mayor Sally Hernandez-Piñero, under Mayor Dinkins.

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40 See Hernandez-Piñero (1990) in File #2351 in the House Numbering Archive at the Manhattan Borough President’s Topographical Office.
Hernandez-Piñero reminded Messinger that Chase Manhattan Bank was “an outstanding corporate citizen” and suggested that the Borough President should keep the following in mind:

As you formulate a policy on address changes, I would encourage you to consider this as an economic development tool and craft a policy that rewards the firms that stay in the City. Chase, with its name as part of the address[,] would have an even greater stake in the vitality of the entire area. Address changes can be used to further this type of psychological commitment.

The address change eventually went through partly because it was recognized that “Chase Manhattan Bank has contributed significantly to the welfare of the City of New York, in terms of economic development and employment.”

The psychology of vanity (along with economic and political clout), it seems, was a compelling enough reason to approve an address change, regardless of whether it might prove an administrative “inconvenience” to the postal authorities.

V. Contradictory Governmental Rationalities and the Production of Spaces of Concrete Abstraction

By going into some depth in the current case study of the spatial history of street and house numbering in Manhattan, this chapter has explored the contradictory logics, interests, and governmental rationalities, as well as the many historical contingencies, that constituted the spatial practices of producing a space of concrete abstraction. Based on the foregoing analysis, a number of conclusions can be drawn. First, narratives of Manhattan’s spatial history that place great emphasis on the implementation of the grid plan, without considering the spatial politics of house

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41 See File #2351 in the House Numbering Archive at the Manhattan Borough President’s Topographical Office.
numbering in the city, are inevitably inadequate and incomplete as analyses of the process of spatial rationalization. It is not so much that the grid plan and its implementation are unimportant, but rather that the numbering of houses as a form of urban governmentality has not received the attention it deserves.

Is not the numbering of houses just as important as the numbering of a city’s gridded streets when it comes to understanding the production of abstract space? Why is it, then, that the rigid morphology of the grid has gotten most of the scholarly attention while the historical geography of house numbering has remained such a banal subject of scholarly indifference? One reason, I would like to suggest, is that the story of house numbering in the city complicates and problematizes conceptions of Manhattan as the ultimate model of order and rationality imposed upon the landscape. By positivist standards alone, the contradictions, out-of-sequence numbers, and other inconsistencies in the development of Manhattan’s house numbering system might just as well support a tale full of contradictions and irrationalities as they would one of the triumph of the “rational.”

It has become a cliché in academic circles to claim that in Manhattan, and across the United States, the imposition of the grid represented the conquest of nature through the power of calculation. Yet, this often-repeated assessment generally ignores the actual irrationalities of constructing and maintaining an expansive spatial regime of inscriptions. Of course, critics have often pointed to the arbitrariness of the grid itself, arguing that it often does not respect existing topography (for the classic illustration of this argument, see Reps, 1965). Even in such accounts, however, the apparent coherency of gridded geometric form is viewed as a signifier of “order”
imposed from above in a totalizing manner. What is often missing from these accounts is a detailed analysis of the piecemeal process of *spatial inscription*, as discussed in the present chapter, which highlights the complexities and contingencies of attempts to rationalize urban space.

The second point to draw out of the discussion is that there was, and still is, a spatial politics to a process as seemingly “technical” as numbering houses in New York City. The failure of Goldman’s plan to renumber Manhattan’s north-south avenues in the 1940s supports this contention and serves as evidence of the conflicting interests that fought over how best to “order” the physical typography of the cityscape. The conflicts between the U.S. Postal Service and the Borough President’s Office likewise are another element of contradiction in the collision between competing governmental rationalities of urban spatiality. A recognition of such contradictory agendas among different governmental agencies complicates monolithic characterizations which suggest that projects of spatial rationalization are simply the result of “seeing like a state” (Scott, 1998). The next chapter draws out a number of themes already touched on here and compares how both real estate “dreams” and the politics of cultural identity have reshaped the Manhattan streetscape.
7. FROM NUMBER TO NAME:

REAL ESTATE DREAMS AND THE POLITICS OF
COLLECTIVE MEMORY IN THE CARTESIAN CITY

Commemorative street names provide a distinguished example of the intersection of the hegemonic ideological structures with the spatial practices of everyday life. Their apparent dailiness and apparent insignificance as well as their recurrent and unreflected use in various contexts, both ordinary and extraordinary, renders the past they represent tangible and intimately familiar. The continuous use of street names amounts to an erratic recitation of significant historical moments and heroes which is not institutionally or officially controlled . . . . They are intended to assert and to reaffirm the validity of the history they reify as a constituent of social reality. Their power lies in their ability to make a version of history an inseparable element of reality as it is constantly constructed, experienced, and perceived on a daily basis.


Commemorative street naming is an important vehicle for bringing the past into the present, helping weave history into the geographic fabric of everyday life. Named streets, like any place of memory, can become embroiled in the politics of defining what is historically significant or worthy of public remembrance.

—Derek Alderman, “Street Names as Memorial Arenas” (2002)

I. Introduction

In previous chapters, I examined the spatial history and politics of constructing urban landscapes as sequentially-numbered spatial regimes of inscriptions. I have focused primarily on the emergence and consolidation of the act of spatial numbering not because I take it to be a privileged moment in the production of space but rather in order to destabilize its taken-for-granted obviousness and the
banality of its self-evident transparency. I have, in short, attempted to historicize and politicize the abstract spaces of everyday life that are more commonly presented as both ahistorical and apolitical via the discourse of legibility (see Chapter 3). It would be a mistake, however, to confine the project of a critical spatial history solely to examining the practice of sequential landscape numbering. There is much more to the production of space—and to the construction of spatial regimes of inscriptions—than the discourse of legibility would suggest. As the discussion of vanity addresses in the previous chapter illustrates, there is considerably more at stake in the production of urban space than simply the logical fulfillment of a calculable and legible order. The present chapter explores the politics of renaming the already-numbered urban landscape of New York City to illustrate the complexities of the production of urban space.

Over the past century and a half, there have been multiple attempts to rename Manhattan’s numbered streets and avenues. In fact, the City Council has often been criticized for devoting too much time to the renaming of streets, since it is not uncommon for more than 40% of all local laws passed annually in New York City to consist of street name changes. Critics often charge that the city should devote its time to more “serious” matters, while proponents insist that street naming is an important component of public recognition in a multicultural society. While the renaming of streets may seem insignificant to some, geographers such as Maoz Azaryahu (1996; 1997) and Derek Alderman (1996; 2000; 2002; 2003) convincingly argue that street naming plays an important role in the formation and legitimization of

42 Throughout much of the 1990s, roughly around 40% of the local laws passed by the City Council of New York consisted of street name changes (Gargan, 1981; Feeney, 1990; Garcilazo, 1992; Siegel, 1993; Lee, 2001; Haberman, 2002).
cultural and political identities through the construction of “commemorative landscapes.”

In his path-breaking work on “collective memory,” twentieth-century sociologist Maurice Holbwachs (1980 [1950]; 1992 [1925]) was one of the first social theorists to systematically examine the significance of spatial ordering in the consolidation of social memories. He argued that different social groups construct their own collective memories through the organization of spaces in a selective manner, thereby creating a sense of group solidarity. Although Halbwachs’ work proved influential, more recent social theorists maintain that group identity does not precede the construction of collective memory but rather the production of commemorative spaces actively constitutes group subjectivities in a performative manner (Misztal, 2003).

Cultural geographers have increasingly drawn attention to the ways in which “places of memory” are both constructed and contested (for a useful overview, see Till, 2003; 2005). Till (2003: 290) contends that political struggles over the spatialization of social memory are principally about determining “whose conception of the past should prevail in the public realm.” Such places of memory can take numerous forms, from museum exhibits, monuments, and historic sites to public protests or the renaming of streets, buildings, and parks. As Till (2005: 18) rightly suggests, “social memory and place-making activities tell us more about the people building a memorial than the peoples and pasts being commemorated.” Conflicting visions of the past generally result from struggles over cultural recognition in the present (Appiah, 1994; Taylor, 1994; Levine, 1996).
The politics of street naming is so contentious, in part, because it opens a space for the contestation of collective memory and the spatial representation of political commitments. Street names generally must be approved by the municipal authorities, which adds a sense of political legitimacy to the name chosen for a given thoroughfare. As a spatial practice, then, street naming is often used as a technique for creating what might be thought of as “spaces of recognition.” Yet, as Chapter 6 illustrates, the naming of streets can also be used to construct “places of exclusiveness.” As Alderman (2000: 672) puts it, place names more generally are part of “larger struggles over social and political identity and are used for resisting the hegemonic order as well as reproducing it.” As we shall see, the cultural politics of inclusion often gives rise to exclusionary spatial projects (West, 1994; Gilroy, 2000), so we must be cautious when assessing the political implications of constructing particular places of commemoration.

In the present chapter, I offer a comparative analysis of two different cases in which Manhattan’s numbered streets and avenues were renamed for divergent purposes: the renaming of the avenues on the Upper West Side during the 1880s-90s and the street name changes that occurred in Harlem a century later. Before doing so, however, I begin by telling a tale of the controversy surrounding the attempt to redesignate Sixth Avenue as the Avenue of the Americas in 1945 (Section II). In this case, city authorities officially renamed a formerly numbered avenue as a sign of solidarity among the Americas, yet most New Yorkers continued to refer to the avenue by its numerical designation in their everyday lives, even decades after it had been formally renamed. The example of the renaming of Sixth Avenue problematizes
the simplistic assumption that numbered streets are inevitably an abstract state imposition against which the inhabitants of a city resist. As I have pointed out in Chapter 3, the inhabitants of abstract spaces may actually come to embrace such a regime of numerical inscriptions and rework it to serve their own ends.

Section III explores how nineteenth-century property owners and real estate developers on the Upper West Side led a movement to rename the avenues west of Central Park in an attempt to make the area a “dreamworld” of rising property values, ostentatious mansions, and capital accumulation. In contrast, during the 1980s-90s a number of significant streets and avenues in Harlem were renamed after prominent African American champions of civil rights (Section IV). What both cases share is a common project of replacing numerical street designations with commemorative names. However, the motives and interests invested in each turn “from number to name” contrast considerably—with the former being a spatial strategy to secure the interests of property and the latter an attempt to preserve a sense of African American history and identity in the midst of a gentrifying Harlem.

Previous chapters have emphasized that the spatial practice of sequentially numbering streets and houses has been a general technique utilized to rationalize and, in a sense, “governmentalize” urban landscapes in the United States. In addition to examining the spatial analytics of such numbering schemas, I also argued that these practices were not merely the domain of technocratic rationality but were also the result of a spatial politics of contestation (see Chapters 4-6). In Chapter 5, I analyzed the counter-discourse that universally opposed the numbering of streets on aesthetic

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43 This characterization of “resistance” to the imposition of abstract space is taken up by writers such as James Scott, Michel de Certeau, and Henri Lefebvre, albeit from different theoretical perspectives. See Chapter 3 of the current study.
and moral grounds, and the current chapter expands upon my earlier remarks concerning the debate between “number” and “name” with respect to designating streets in U.S. cities and towns.

By conducting a comparative analysis, my aim is to illustrate the danger of romanticizing the shift from number to name in the physical typography of the city-text. Upon comparison, it may at first appear that the street name changes on the Upper West Side were exclusionary, whereas the commemorations of civil rights leaders in Harlem were part of an inclusive politics of cultural recognition. However, as noted above, the demand for inclusion may itself be part of an exclusionary politics of difference (though this need not necessarily be the case). As I mentioned in Chapter 1, additional research is required to fully consider the case of Harlem’s street name changes. Nevertheless, this chapter provides a preliminary analysis of the paradox that spaces of inclusion may simultaneously be sites of spatial exclusion.

For instance, the majority of those commemorated via street names in Harlem during the 1980s were African American men, thereby excluding black women from the “places of memory” in Harlem’s public sphere. This exclusion of women from the sites of public memory production was not an isolated occurrence, as we saw in Chapter 4 that city directory publishers rarely included women (unless widowed) in the pages of a city directory (for a general discussion of the exclusion of women in places of memory, see Dowler, 1998; Till, 2003).

Similarly, the racialization of urban space can also be informed by, and give rise to, reactionary forms of racial essentialism that promote exclusionary agendas (Gilroy, 2000; Bonnett and Nayak, 2003). This is evident in certain aspects of both
cases considered in this chapter—on the Upper West Side with the construction of bourgeois “whiteness” vis-à-vis Irish immigrant stereotypes and in Harlem where black nationalists on some occasions harkened back to Marcus Garvey’s essentialist conceptions of “blackness.” The two cases differ in that the former reaffirmed the “hegemonic order” while the latter sought to subvert the status quo, yet both were motivated by an essentialistic conception of “race” that is ontologically and, I will argue, politically problematic.

There is nothing inherently wrong with naming streets in honor of African Americans. Indeed, given the history of slavery, racism, and discrimination in the United States, it may well be a sign of democratic inclusiveness to name streets after those who fought for basic civil rights for all Americans. The problem arises, however, when this type of project is framed in such a way that an essentialized “racial” identity is reaffirmed through the exclusion of “others” (Said, 1978). Gilroy (2000) convincingly argues that racial essentialism is ontologically and ideologically bankrupt—whether among white supremacists or black nationalists—and that it has historically been linked to the politics of fascism.44

Cultural and political geographers have likewise become increasingly wary of essentialist conceptions of “racial” identity. Bonnett and Nayak (2003: 303), for instance, question the fixed nature of race and instead follow Anderson (1993) and Keith (1993) by insisting that “the process of spatialized racialization needs to be understood as historically contingent.” Kobayashi (2003: 551) also maintains that “race” should be seen not only as a social construction but as a “political construct”

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44 Scholarly reactions to Gilroy’s recent book, Against Race (2000), have been mixed. For instance, see Bhasin (2000), Aronowitz (2001), Asante (2001), and Judy (2001).
as well. My discussion of the racialization of urban space in this chapter draws inspiration from the anti-essentialist politics of such recent theorists, and Section V concludes this chapter with a general discussion of the comparison of these two case studies of the shift “from number to name” in the Cartesian City.

II. “Sixth Avenue is Now a Memory”?

It was a bright, sunny afternoon on October 20, 1945, when an estimated 100,000 people lined up along Sixth Avenue in Manhattan as a parade of 4,000 returning U.S. Pacific Navy veterans marched from 56th Street to Bryant Park on 41st Street (Figure 7.1). The Allies had declared victory over Japan two months earlier and the parade celebrated the end of World War II and the heroism of the U.S. Navy. “Welcome to you returned conquering heroes of the United States Navy,” exclaimed New York City Mayor Fiorello La Guardia. He continued, “Your job made this possible because you have cleared the Pacific of all the snakes and rats. I hope you will enjoy your stay in this town and that you will get all you want.” While the crowd attending the parade came mainly to show their support for the returning veterans, Mayor La Guardia conveniently used the occasion to mark the official dedication of the Avenue of the Americas, formerly known as Sixth Avenue (“Navy Steals Show at Dedication of Avenue of Americas by Rios,” 1945: 1 and 5).

“How fitting it is,” La Guardia boasted, “to have you here on this day to dedicate the Avenue of the Americas to the peace and solidarity of the Western
Figure 7.1: Celebrating “peace and solidarity” by renaming Sixth Avenue (“Navy Steals Show,” 1945)

Hemisphere.” As a symbol of “solidarity” in the Americas, twenty-two jeeps followed behind the Navy parade, each displaying the flag of a different country in the Americas. La Guardia insisted that the Avenue’s new name transcended the utilitarian function of street signage, because it was “an expression on the part of our people of the love and affection we have for our sister republics of Central and South America.” The Avenue of the Americas was to be a spatial representation of the United States’ so-called “Good Neighbor Policy,” the Mayor noted. La Guardia explained that for too long the Good Neighbor Policy had been “limited to and believed to have been fulfilled when American money went down there [to Central and South America] to exploit people. I hope that policy will not be repeated and will soon be forgotten.”
After La Guardia was finished speaking, Chilean President Juan Antonio Rios offered a few remarks acknowledging that while there remained significant conflicts among the countries of the Americas, New York City’s Avenue of the Americas would signify a sense of continental unity and solidarity. Rios then placed a new sign in a ceremonial street post, thereby officially designating the Avenue of the Americas (Figure 7.1). When the parade was over, Rios and La Guardia attended a luncheon at Rockefeller Center, hosted by the Avenue of the Americas Association, where Rios gave the Mayor a Chilean Legion of Merit for his good will in renaming one of Manhattan’s numbered thoroughfares in honor of American unity.

The name change was first proposed by the Sixth Avenue Association, which later became the Avenue of the Americas Association. As early as 1941, the Association had advocated for the renaming of Sixth Avenue with the more prestigious-sounding “Avenue of the Americas,” and the initial proposal was to extend this designation all the way from the Battery, at the southern tip of Manhattan, to Central Park (“Wants 6th Ave. Renamed,” 1941: 23). This was part of the Association’s broader agenda to encourage the U.S. to import goods from South and Central American countries, as well as Canada, and to make the Avenue of the Americas New York’s Pan-American corridor, symbolically linking North and South as the avenue traversed Manhattan in an approximate north/south direction (“Sixth Ave. to Help Hemisphere Trade,” 1941).

Only after World War II had ended did the City Council take up the matter of renaming Sixth Avenue. On September 20, 1945, the Council debated the name change for nearly two hours, according to an account by the New York Times (“Name
of 6th Ave. to be Changed to the Avenue of the Americas,” 1945). The bill was initiated by Councilman William Carroll, a Manhattan Democrat, and Mayor La Guardia had taken the matter so seriously that he ordered an “emergency message” to the Council directing its members to adopt the bill without delay. La Guardia also proposed to have a parade along the Avenue on Columbus Day for the official name change ceremony, since Columbus had, after all, “discovered” the Americas. A number of Italian Councilmen—two Democrats and a Brooklyn Communist—vehemently objected to the latter parade since it conflicted with the annual Columbus Day parade on Fifth Avenue. As Councilman Samuel Di Falco put it, “You can’t have parades up Fifth Avenue and Sixth Avenue, as the Mayor suggests, on the same day” (“Name of 6th Ave. to be Changed to the Avenue of the Americas,” 1945: 23).

Other members of the Council criticized the Mayor for ordering an emergency message for something as banal as a street name change. “In the past when our tongues were hanging out for emergency messages, we haven’t got them,” maintained Bronx Democrat Louis Cohen. Critics such as Cohen argued that emergency messages should be reserved for “serious” issues such as unemployment rather than the renaming of streets. Former Manhattan Borough President, Stanley M. Isaacs, who had unsuccessfully advocated for the adoption of the hyphenated house numbering system along Manhattan’s north/south avenues several years earlier (see Chapter 6), was now a member of the City Council and bitterly opposed the proposed street renaming.

After holding a brief conference with the Mayor on the subject, a compromise was eventually agreed upon and the bill passed by a vote of 12 to 1. Whereas the
original bill would have extended the Avenue of the Americas all the way down to the Battery (thereby requiring the city to change the name not only of Sixth Avenue but also of Greenwich Street, Trinity Place, and Church Street), the compromise bill only affected Sixth Avenue. The parade date was also changed so as not to conflict with the Columbus Day celebrations on Fifth Avenue. The only opposing vote was cast by Bronx Independent Michael Quill, who argued that the new name was, according to a *New York Times* report, “awkward and inappropriate” (“Name of 6th Ave. to be Changed to the Avenue of the Americas,” 1945: 23). He also contended that such a long name would cause problems for subway and bus signs.

When the City Council adopted the bill to rename Sixth Avenue, the Sixth Avenue Association praised the measure, while many smaller shopkeepers and merchants along the Avenue opposed the new name. “Why doesn’t the City Council take a vote of the people who own stores along the avenue?” commented Anna Irvine, who owned a jewelry store on Sixth Avenue (“Merchants Divide on 6th Ave. Name,” 1945: 48). By the end of the month, there was so much resistance to the new name that Mayor La Guardia held a public hearing at City Hall to appease the opposition. Those who publicly opposed the bill included the director of the Greenwich House, members of the Greenwich Village and Washington Square Associations, the Wyckoff-Bent Corporation, the Citizens Union, and “a retired Brooklyn patrolman” (“6th Avenue’s Name Gone With the Wind,” 1945: 21).

One critic of the plan charged that the Avenue of the Americas was “an awful mouthful” that would not be acceptable to most New Yorkers. A representative of the Wyckoff-Bent Corporation argued that the new name was the work of “a group of
people seeking propaganda.” Another opponent of La Guardia’s plan asked if the Mayor was aware of the enormous expense of replacing all the subway signs as well as the inconvenience to thousands of businesses that would have to “change their address designation in telephone books.” Challenging the Mayor’s use of vanity street names, one critic of the plan lambasted “the ridiculous change to a flossy and inappropriate name because it didn’t take a fancy name to make Fifth Avenue what it is” (“6th Avenue’s Name Gone With the Wind,” 1945: 21).

The Mayor, however, had already made up his mind and within an hour of the public hearing the Borough President was up at the corner of 50th Street posting a temporary sign for the new Avenue of the Americas, which was formally designated by La Guardia and Rios at the parade on October 20. There were numerous attempts to change the name of Avenue of the Americas back to Sixth Avenue, yet none were successful and the avenue continues to be officially designated by its “awful mouthful” of a name even today. However, despite all the pomp and circumstance of its ceremonial dedication and its supposed symbolism of pan-American solidarity, the name never quite caught on among the vast majority of New Yorkers who still—more than half a century later—continue to refer to the thoroughfare as Sixth Avenue.

In 1955, a decade after Sixth Avenue was renamed the Avenue of the Americas, the New York Times ran a piece entitled, “After Ten Years, It’s Still 6th Ave.” (Esterow, 1955). The Times surveyed 200 people along the Avenue and found that New Yorkers favored Sixth Avenue over the newer name by an 8.5 to 1 margin. They also reported that a number of subway and bus signs marking the old Sixth Avenue had never been replaced and that the Post Office continued to deliver mail to
Sixth Avenue addresses. “We’re traditionalists,” explained a representative of the New York City Omnibus Corporation, “We applaud the idea of making it Avenue of the Americas, New Yorkers just won’t go along with it” (Esterow, 1955: 12). When the Executive Vice President of the Avenue of the Americas Association, therefore, confidently declared in 1964 that “Sixth Avenue is now a memory” (Henlein, 1964: 26), he clearly underestimated the power that memory and habit could hold over the urban imagination. Two decades later, Mayor Edward Koch publicly recognized that New Yorkers continued to use the name Sixth Avenue, and the old numerical designation began showing up again on official street signs along with its more verbose counterpart (Tauranac, 2002) (Figure 7.2). Sixth Avenue may indeed be a
memory, but it is a memory that has been hard to shake regardless of all the formal pronouncements insisting that it “officially” did not exist.

III. From Shantytown to Bourgeois Dreamworld: Remaking the Cultural Landscape on the Upper West Side

The basic layout of Manhattan’s grid plan was mapped out at the beginning of the nineteenth century, yet it was not until the second half of the century that major public works projects extended the boundary of urban growth into the northern reaches of the Island. As I noted in Chapter 6, the East Side developed more rapidly than the West Side for a number of reasons. First, topographical differences were a major factor affecting the cost of street construction (Moehring, 1981; Burrows and Wallace, 1999), with the West Side considerably more rugged than its eastern counterpart (Figure 7.3). Topography alone, however, cannot explain the dominance of East Side development. A concentration of transportation services east of Fifth Avenue also gave the East Side a decisive advantage, yet Scobey (2002: 5) convincingly argues that we should be wary of accounts that place too strong an emphasis on what he calls “infrastructural determinism.” He contends that “the introduction of public improvements was itself paced less by technological progress than by the dynamics of capital formation and land speculation” (Scobey, 2002: 5). West Side real estate speculation led to inflated land prices in the decade following the Civil War, yet the bottom fell out with the panic of 1873.

After the collapse of the real estate market in the 1870s, many West Side property owners still had to pay property taxes. So, in a desperate move, they rented
Pre-Grid Manhattan Topography, circa 1819
(feet above mean sea level at Sandy Hook, N.J.)

Pre-grid topography elevation range
- 0–30
- >30–60
- >60–90
- >90–120
- >120–154

Historical data converted into feet above the National Geodetic Vertical Datum (NGVD 1929)
Note: Data range between 1st and 155th Streets

Figure 7.3: The historical topography of Manhattan Island (Rose-Redwood, 2003)
plots of land to German, Irish, and Dutch immigrants, who constructed make-shift wooden houses and cultivated gardens in what came to be known in the popular press as “Shantytown” (Figure 7.4). According to some estimates, there were as many as 10,000 shanty dwellers by 1880 (“A Visit to Shantytown,” 1880; Stern et al., 1999), with ground-rents ranging from $20 to $100 per year (“Shantytown,” 1880). Periodically, newspaper reporters and magazine writers would venture into Shantytown to give their bourgeois audience a voyeuristic taste of the rugged life. Shanty dwellers were often depicted as “ignorant people” who had been reduced to a state of near barbarism (“Squatter Life in New York,” 1880: 567). One anonymous writer for Harper’s New Monthly Magazine wrote in 1880 that “the squatters are deplorably careless in their habits, eating and sleeping with no more decency than the
goats, pigs, geese, and dogs that take ‘pot-luck’ with them” (“Squatter Life in New York,” 1880: 567). Condescension and paternalism marked the tenor of most such accounts.

Many of the inhabitants of Shantytown, however, were not unemployed, and more often than not they were suspicious of the paternalistic concerns of inquisitive reporters and real estate agents (and with good reason, as we shall see). Most of the men served as day laborers and some were even employed as “porters, messengers or drivers” in the city (“Shantytown,” 1880: 862). Families grew vegetables in gardens for their own consumption and also sold their produce downtown at the Washington Market (Figure 7.5). Shantytown tenants often tended goats for their milk, which was a continuous subject of ridicule and amusement among bourgeois journalists. As one
writer for the *New York Times* wryly remarked, “he who has studied the domestic economy of the worthy Irish residents of Shantytown is well aware of the almost fraternal affection existing between that race and the goat, which is always a cherished member of the household and is never denied a place about the family hearthstone” (“Mr. Fuller and the Goat,” 1885: 4). The article went on to suggest that the main reason for the lack of enforcement of the city law prohibiting goats from running wild in the streets was the fact that many uptown police officers were of “Irish extraction.” The solution, the author concluded, was for the Police Commissioners to hire more Italians instead.

Although some West Side property owners benefited from renting lots to shanty dwellers, the leading members of the West Side Association (WSA), a formal organization of property owners pushing for West Side property development and public works projects, were adamantly opposed to the expansion of Shantytown.45 Founded in 1866, the West Side Association sought to shape public opinion in favor of West Side improvements. Not only did its members worry that shanty dwellers would scare off more affluent tenants, they were also deeply concerned that the Shantytown inhabitants would permanently make their mark upon the cultural landscape through the common use of place names that might eventually become codified after continuous usage. That fear was, I argue, one of the major impetuses that led the West Side Association to lobby for the renaming of streets and avenues on the Upper West Side during the 1880s and 1890s.

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45 For a useful account of the formation of the West Side Association and its agenda, see Scobey (2002). Also, see Burrows (1999) and Stern (1999).
The project to rename the West Side avenues was first conceived in the early 1870s. In 1871, a paper was read before the West Side Association on the subject of “Appropriate Names for the New Avenues and Public Places on the West Side” by A.W. Colgate. “We all know how it is,” Colgate (1871: 22) told his audience, “that any name, good or bad, once fastened to a locality is pretty sure to stick.” He went on to note that:

It passes readily into conversation, appears in print, and soon finds its way, not only into literature, but also into titles, mortgages, and other instruments pertaining to the transfer of real estate . . . . We should also remember that good names cost no more than bad ones, and that the only way to avoid the bad, is to be beforehand with the good. The present inhabitants [read: shanty dwellers], such as they are of the West Side, are not likely to give any names that property owners would care to see adopted, and yet they may unconsciously christen many of the main streets, with names not easily got rid of. Witness in London—Rotten row, Hog lane, Crab-tree street, Peacock street, Shoe lane, and others equally as absurd, which had there [sic] origin in this way, and which generally retain their homely names, even though their neighborhoods become aristocratic (Colgate, 1871: 22).

Right from the very beginning, then, Colgate insisted on the necessity of fixing “good” street names before the shanty tenants could do so, and he hoped to ensure that the names given by property owners, not tenants, would be “sure to stick” to the cultural landscape of the Upper West Side.

If Hog lane was unsatisfactory to Colgate, so too were the numerical designations of the plan of 1811. “The present numerical system of names,” Colgate (1871: 22-3) argued, “though not without some advantages, indicates a barrenness of invention that is unparalleled in any European City.” Instead, he maintained that there were three categories of names that were generally appropriate: historical (i.e., “the names of famous men”), geographical (i.e., “names suggested by the topography of the place”), and proprietary names (i.e., “names of the original holders of large
parcels of real estate through or near which the streets run”). Unsurprisingly, Colgate (1871: 25) favored proprietary names, at least in principle, since “[t]he names of the original landholders afford the largest and perhaps the best selection of all, and precedent is largely in favor of their adoption, especially as many of these old families were distinguished in the early history of the city.”

As we shall see below, shanty dwellers that had in some cases resided in the area for over a decade sought to challenge the property rights of landowners until most inhabitants of Shantytown were displaced during the 1880s. Colgate’s preference for “proprietary names,” therefore, must be situated within the context of struggles between landowners and shanty inhabitants on the West Side. Calling for the West Side’s numbered avenues to be rechristened using the names of “original holders” of real estate in the area, then, was a clear sign that Colgate sought to remake the cultural landscape as a symbolic marker of property and propriety, thereby excluding the shanty dwelling immigrant population from the realm of legitimate socio-spatial signification.

Although Colgate was generally opposed to numerical designations for West Side avenues (presumably because they we not sufficiently “aristocratic”), he proposed a compromise for the numerical cross-streets. The argument went as follows: cross-streets above 100th Street were a mouthful to pronounce, so one could shorten them in one of two ways. First, the “hundred” could be dropped and the term “way” used instead of “street,” so that One Hundred and Fifty-Third Street would become “Fifty-Third Way.” Another proposal was to replace “hundred” with “north,” resulting in “North Fifty-Third Street.” In closing, Colgate (1871: 26) claimed that the
early adoption of at least some type of nomenclature, before the colloquialisms of Shantytown gained legitimacy, “would aid in bringing the adjacent property into notice and would give it a locality and even a value which it does not now possess.” He was confident that whatever the West Side Association recommended would “no doubt be favorably received by the Department of Public Parks, and thus soon find its way into the maps, and so become part and parcel of the city” (Colgate, 1871: 27).

After Colgate’s speech, the president of the West Side Association, William Martin, concurred with his assessment, and, according to the Proceedings, Martin reiterated that “it was important to consider the subject maturely, and in advance, lest names not well selected, should attach to these new names and places, which it would not be easy to get rid of . . . . We must take care lest names not so appropriate . . . become started and adhere to these new and unnamed places” (see Colgate, 1871: 28-9). The WSA’s decision to lobby for street names was inseparable, therefore, from its desire to displace (both figuratively and literally) the inhabitants of the shanties.

Colgate’s recommendations were referred to the WSA’s Executive Committee, which was to provide a more detailed report at the Association’s next meeting. It was not until two years later, however, that a substantive report was given again on the subject of “appropriate names” for streets and avenues on the West Side. This time William Martin himself delivered a paper entitled, “Report on Appropriate Names for the New Avenues and Roads on the West Side” (1873). Martin (1873: 193) similarly cautioned that the West Side’s streets and avenues “must either have well-considered and satisfactory names chosen for them, or they will run the risk of
having haphazard names attach and stick to them,” which was clearly a jab at the naming practices of Irish and German shanty residents.

“A proper name,” declared Martin (1873: 173), “is one distinctive and euphonious arising from some historical or proprietary association, or suggested by some local natural feature.” He argued that the “numerical names” of the West Side avenues were inadequate because they “serve rather the purposes of a catalogue than as proper and appropriate names” (Martin, 1873: 194). While the logic of the “catalogue” may have been adequate as a means of rationalizing administrative practices, its utilitarianism appeared distasteful to property owners set on turning the Upper West Side into a dreamworld of capital accumulation and conspicuous consumption.

Martin called on the city to change 8th, 9th, 10th, and 11th Avenues to the Westbourne, Clendenning Avenue, Fort George Avenue, and Bloomingdale Avenue, respectively. Since 8th Avenue was the western border of Central Park, Martin suggested that “Westbourne” would be appropriate, because “bourne” was old English for “boundary.” Clendenning was the name of an estate that 9th Avenue ran through at 106th Street (which had been named after a city merchant). Replacing 10th Avenue with Fort George Avenue was reasonable, argued Martin, since it traveled northward to the old Fort George site, a relic of the Revolutionary era. He believed that this particular avenue would “soon become one of the most agreeable pleasure drives on the Island” (Martin, 1873: 177). Lastly, Bloomingdale was the name of a village on the Upper West Side since the days of the Dutch and had also been the name of what is now upper Broadway.
In addition to offering new names for the West Side avenues, Martin also suggested new names for various other streets and avenues between the northern edge of Central Park and 155th Street. Above the Park, he proposed to rename 6th and 7th Avenues Fordham and Westchester Avenues, respectively. Martin also argued that above 110th Street, the name “Westbourne” for 8th Avenue would not make sense, because it no longer served as the western boundary of the Park. Likewise, 8th Avenue itself was inadequate because it was not contiguous with 8th Avenue below the Park (being separated by the proposed “Westbourne”). It therefore needed a new name, insisted Martin, and he recommended the name “Amstel Avenue” in honor of the city’s Dutch heritage.

Martin concluded by pointing out that many of the “happier” selections had been chosen upon the advice of Andrew H. Green, the city comptroller, and he also acknowledge a librarian from the New-York Historical Society for lending “the aid of his historical research and local learning” (Martin, 1873: 192-3). The written report was followed by a concluding note in which Martin explained that some members of the Association had disagreed with several of his recommendations. Yet, for the most part he remained firm, ridiculing a suggestion to replace his “Bloomingdale Avenue” with the “West End Avenue.” “The region is properly called the ‘West Side’,,” he insisted, “It is not an end. The avenue is the north and not the west end of the Eleventh Avenue” (Martin, 1873: 196). Ironically, of all the new names mentioned above, the only one that was eventually adopted by the city was the West End Avenue!\footnote{Several of the other names proposed, such as Fort George Avenue, were adopted farther north yet not between 59th and 110th Streets, or the north/south extent of Central Park.}
By the end of the 1870s and beginning of the 1880s, the West Side Association began lobbying the municipal authorities to legally rename the West Side avenues. At a WSA subcommittee meeting on September 27, 1879, the Committee on Streets and Avenues was called on to report again at the following meeting on the “proper course to pursue to legalize” the names chosen by the Association. On the very same page of the meeting minutes, the Committee on Buildings was asked to consider the dilemma of “what action is necessary in order to ensure freedom from Shanties and other Nuisances on the West Side” (West Side Association, 1879-1885: 62, emphasis added). The renaming of the avenues and the “freedom from Shanties” were both part of the same struggle to remake the Upper West Side in the image of proper “white” (that is, not Irish) bourgeois respectability and rising property values.

In 1880, the West Side Association decided to lobby first for 11th Avenue to be renamed “West End Avenue,” and they agreed to leave 9th and 10th Avenues alone for the moment at least. The fate of 8th Avenue was still up for debate, but the Association determined that the cross-streets “should retain their present numerical names” (West Side Association, 1879-1885: 48). It was also at this time that the WSA requested that a city ordinance be passed changing the house numbering system for all cross-streets west of Central Park. Recall from Chapter 6 that the law of 1838 had set the origin for the cross-street house numbering system at Fifth Avenue, and in 1861 another house numbering ordinance was passed that applied the Philadelphia System (of giving one hundred house numbers per block) to all of Manhattan’s cross-streets north of 9th Street. The West Side Association, in effect, sought to shift the West Side house numbering axis from Fifth to Eighth Avenue, between 59th and 110th
Streets (i.e., the boundaries of Central Park), because it was seen as being more prestigious to have lower house numbers, beginning with No. 1 (as we saw in Chapter 6 with the fight over No. 1 Park Avenue). Later that year, 11th Avenue was, in fact, renamed West End Avenue, yet it would take more time to convince the city to adopt a new house numbering ordinance, which was eventually passed and had been fully implemented by the mid-1880s (“A Rush to the West Side,” 1886).

On December 10, 1881, the WSA’s Committee on the Naming of 8th Avenue unanimously agreed upon the name “Central Park West” instead of Martin’s earlier suggestion, “Westbourne.” The report was accepted and the next step was then to write up “a petition for the said naming [to] be circulated among West Side owners for their signatures” (West Side Association, 1879-1885: 165). Within a week, the Association adopted a resolution in favor of the new name since “a large majority of the property owners on said avenue, desire such name to be given” (West Side Association, 1879-1885: 166). In 1883, 8th Avenue was officially renamed Central Park West. New designations for 10th and 11th Avenues were eventually adopted in April of 1890, being changed to Columbus and Amsterdam Avenues, respectively, which have “stuck” into the present.47

The renaming of avenues on the West Side occurred at the same time that a boom in property development opened the prospects of increasing profits for West Side landowners and speculators (Scobey, 2002). All the incentives were now in place to render the tenants of Shantytown superfluous, at least from the perspective of

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47 It is worth pointing out that Stern et al. (1999: 744) incorrectly suggest that 8th Avenue was renamed Central Park West on April 22, 1890. The correct date of the name change is February 7, 1883. I would like to thank Carl Riobo at Barnard College for bringing this error to my attention.
their landlords. “Freedom from Shanties” was the rallying cry among property owners, yet the residents of Shantytown were not willing to be displaced so easily. In 1880, the same year that the West End Avenue was christened, the landowners of the West Side began what the *New York Times* referred to as all-out “warfare” against their shanty tenants (“Ten Thousand Squatters,” 1880). Landowners generally went to the courts to get official eviction notices and then attempted to physically force their tenants off the land and demolish their wooden dwellings (Figure 7.6).

Journalists warned their bourgeois readers of the growing socialistic sentiments among the shanty dwellers. “Some of these squatters have lived in this district a dozen years or more,” noted the *New York Times*, “and they have come to
believe that their squatter rights are superior to the rights of the owners of the land” (“Ten Thousand Squatters,” 1880). An account in *Scribner’s Monthly* made note of a saloon on Eighth Avenue and 72nd Street that was “kept by an intelligent, bristly old German, with ‘exile of ‘48’ written all over his socialist face” (“Shantytown,” 1880: 863). Needless to say, this was not seen as a compliment to the “bristly old German.”

The tensions ran high when the eviction notices were delivered to the tenants. Dogs were often unleashed on the deputy marshals and bailiffs who brought the notices, and most landowners “never visit[ed] the locality without being well armed” (“Ten Thousand Squatters,” 1880: 8). The *New York Times* reported one case in which “a Deputy Marshal, wandering about Eighty-first-street serving papers, was seized, and a milk-can, half filled, was turned over his head like a hat” (“Ten Thousand Squatters,” 1880: 8). In 1881, many tenants were still holding out and the West Side was depicted as “the paradise of squatters and goats, whose shanties disfigure the landscape” (“Building Up A Desirable Portion of the City,” 1881: 14). By 1886, however, the vast majority of the shanties had been “blasted out of existence” (“Selling the West Side,” 1886: 8), the cross-street house numbers had been shifted from Fifth Avenue to Central Park West, and by 1890 all of the numbered avenues on the West Side were given their current names. Shantytown had, indeed, been displaced by the dreams and speculations of property.

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48 The phrase “exile of ‘48’” is a direct reference to the revolutionary uprisings throughout much of Europe in 1848. Sparked by economic depression and poor agricultural harvests, revolution broke out first in France and then in various other European countries. Hobsbawm (1984 [1975]: 10) characterizes these events as “social revolutions of the labouring poor” and notes the socialist aspirations of many of the revolutionaries. He also points out that it was not merely a coincidence that Marx and Engels’ *Communist Manifesto* was also published in 1848. In general, the 1848 revolutions proved unsuccessful and did not achieve the socialist goals of the working class.
IV. Taking History to the Streets: Harlem and the Spatial Politics of Collective Memory

Like the Upper West Side, the Harlem of the late nineteenth and early twentieth centuries was “specifically designed to be a white world” (Jackson, 2001: 24). White property owners used restrictive covenants in order to prevent African Americans from buying, or even renting, property in Harlem. Much like the history of development on the Upper West Side, real estate speculation in Harlem resulted in “inflated prices and artificial market values” (Taylor, 2002), eventually leading to a steep decline in the real estate market in 1905. It was at this time that a number of property owners began renting to African Americans, and both white and black realty companies sold properties in Harlem to blacks. The fear of a so-called “Negro invasion” led many whites to leave the area in an early instance of “white flight.” Unlike the eventual displacement of the inhabitants of Shantytown, however, Harlem remained a predominantly black community throughout the twentieth century and is often referred to as the “capital of black America” (Jackson, 2001: 19).

During the 1920s, the black population in Harlem increased dramatically to over 200,000, and the number of white residents continued to sharply decline. Between 1925 and the Great Depression, Harlem was the site of considerable cultural and artistic experimentation, with black writers, artists, and musicians taking part in what came to be known as the “Harlem Renaissance” (WINTZ and Finkelman, 2004; Carroll, 2005). This period has, in many respects, become a sort of “golden age” to which historical representations of Harlem continue to harken back. By the mid-

49 For a general background on the social and literary history of Harlem, see Osofsky (1996 [1966]) and Boyd (2003).
1920s, the African American presence in Harlem was beginning to make its cultural mark on the city’s symbolic landscape. In 1925, one of the first public squares to honor an African American in New York City was dedicated Dorrence Brooks Square at 136th Street and Edgecombe Avenue, named after a black soldier who had fought and died in World War I. Over 10,000 African American residents attended the dedication, and the New York Times reported that the square was to be a memorial not only for Brooks but to all “Negro Soldiers” who had fought in the Great War (“Dedication of Square Deferred Two Weeks,” 1925; “Name a City Square for Negro Soldier,” 1925; “Park to be Memorial to Negro Soldiers,” 1925).

After the civil rights struggles of the 1960s, a grassroots movement to commemorate African Americans gained momentum in Harlem as well as in cities across the country. Rhea (1997) describes this general project of various “racial” minority groups calling for cultural recognition as the “Race Pride Movement” and contends that African Americans were the initiators of such a cultural politics in twentieth-century America. Beginning in the 1970s, various streets, avenues, and parks in Harlem and other sections of upper Manhattan were renamed after distinguished African American men. One of the earliest of such renamings occurred when the African Nationalist Pioneer Movement successfully lobbied to rechristen Harlem’s Mount Morris Park as Marcus Garvey Park in 1973, as a way to honor the Jamaican-born Pan-African nationalist (Feirstein, 2001). A year later, Seventh Avenue, north of Central Park to 155th Street, was renamed Adam Clayton Powell Jr. Boulevard by a City Council vote of 37 to 1 (see Public Hearing on Local Laws, 1974). Powell, who had died two years earlier, was a civil rights leader, the first
African American to become a member of the City Council, and also served 11 terms as a U.S. Congressman from Harlem. In 1977, Eighth Avenue above Central Park was renamed Frederick Douglass Boulevard, and West 106th Street was symbolically named Duke Ellington Boulevard, although the latter still officially retained its original numerical designation as well ("Names of New York: Duke Ellington Boulevard," 2000; "Names of New York: Frederick Douglass Boulevard," 2000).

In the 1980s, Harlem witnessed a proliferation of street renamings to honor slain civil rights leaders as well as black artists, musicians, and athletes. It was in the 1980s that designations such as Langston Hughes Place (1982), African Square (1983), Dr. Martin Luther King Jr. Boulevard (1984), and Malcolm X Boulevard (1987) were legally established (Feirstein, 2001). The corner at which Adam Clayton Powell Jr. Boulevard intersects Martin Luther King Jr. Boulevard (125th Street) to form African Square is perhaps the most dramatic illustration of how Harlem’s cultural landscape has become a space of recognition for the African American community and a site for the social construction and spatialization of collective memory (Figure 7.7). Councilman Frederick Samuel sponsored many Harlem street renaming bills during the 1970s and 1980s and justified his cause by remarking that “[w]e’re trying to say, particularly to our young people, that more happened to black folks than slavery to welfare” (as quoted in Quindlen, 1983: 27).

The collective memory of the “African American experience” is not simply a monolithic set of remembrances embraced by all but rather is constructed through a process of cultural struggle over the proper limits of recognition and commemoration (Alderman, 2002). Recent sociological and anthropological accounts of spatial
politics in Harlem convincingly demonstrate that racial and class-based differentiations create fault lines that lead to a continuous negotiation over what should constitute Harlem’s spatialized collective memory (Jackson, 2001; Taylor, 2002; Prince, 2004). The street name changes discussed above often remain contested even within Harlem’s African American community, as sociologist Monique Taylor contends in her recent book, *Harlem Between Heaven and Hell* (2002). Taylor illustrates how some African Americans in Harlem favor such renamings as a way to instill a sense of history in younger generations while others oppose the name changes. “The idea that the history of Harlem is central in black culture,” insists Taylor (2002: 41), “does not necessarily result in shared images of a remembered past.” Some residents, for instances, continue to refer to Adam Clayton Powell Jr.
Boulevard by its former numerical designation—Seventh Avenue—much as the Avenue of the Americas continues to be known as Sixth Avenue.

When the issue of renaming 125th Street in honor of Martin Luther King Jr. arose, there were a number of residents in the community who came out against the change, arguing that it would lead to confusion since 125th Street was well-known as Harlem’s central business district (Taylor, 2002). The eventual compromise was to use both names in order to maintain the numerical continuity of Manhattan’s sequentially-ordered cross-streets while also commemorating one of the country’s most widely respected civil rights leaders. This dual-system of street naming, which combines numerical and commemorative names for the same thoroughfare, is a common practice when it comes to designating Manhattan’s cross-streets. Yet, when north/south avenues have been renamed the city has usually attempted to officially drop the numerical designation, despite the fact that many New Yorkers continue to refer to the avenues by number.50

Of all the numbered avenues of the original grid plan that pass through central Harlem, Fifth Avenue has been the most resistant to change (indeed it is the only one that has not yet been renamed!). The struggle over retaining or renaming upper Fifth Avenue has arguably been one of the most significant street naming conflicts within Harlem’s recent history. In the mid-1980s, there was an unsuccessful attempt to rename the avenue “369th Plaza” to commemorate the all-black 369th Regiment, also known as the “Harlem Hell Fighters,” from World War I (Moore, 1988; also, see Harris, 2002). Later in the decade, the African Nationalist Pioneer Movement lobbied

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50 Part of the explanation for such differences is that there are considerably more cross-streets than avenues in Manhattan, which has been used as a justification for maintaining the numbered cross-streets while dispensing with the city’s numerical avenue designations.
to change upper Fifth Avenue to Marcus Garvey Boulevard, in part because it was the centennial year of Garvey’s birth.

When two community boards approved the new name, a number of politicians—including U.S. Congressman Charles Rangel—initially came out in favor of the change, according to the *Amsterdam News* (Browne, 1988). However, many of the middle-class black residents of Riverbend Co-op and the Riverton Houses, near 139th Street and Fifth Avenue, bitterly opposed the name change. Gloria Harrison, a resident of the Riverbend Co-op and a professional accountant, led a petition drive in opposition to Marcus Garvey Boulevard. The vice chairwoman of Riverbend likewise ridiculed the Garvey designation by exclaiming, “Imagine, ‘Saks Marcus Garvey’” (as quoted in Roberts, 1988: B1), implying that Saks Fifth Avenue had a more prestigious ring.

The president of the Uptown Chamber of Commerce went so far as to argue that “if there’s one avenue we would like to maintain its name, its Fifth, for everything it connotes to the country and for the continuity between Harlem and the rest of the city” (as quoted in Roberts, 1988: B1). Fifth Avenue may still be a numerical designation, but over the years it has accumulated a considerable amount of symbolic capital with many proclaiming it “an international symbol of fashion and wealth” (Patterson, 1998: 216). The conceit of Fifth Avenue knows virtually no limits as popular mythology announces that it “is the finest street and the best address in the world” (Patterson, 1998: 216). When the president of the Uptown Chamber of Commerce enlisted the prestigious connotations of Fifth Avenue as a means of shooting down the Marcus Garvey name change, therefore, he was tapping into a
politics of cultural recognition of a very different sort—one that privileged the image of wealth and economic status associated with Fifth Avenue. It was also a means of suggesting that Harlem should not be artificially divided from the rest of the city or nation by a politics of difference but should rather hold onto the symbolic capital of Fifth Avenue.

What is more interesting, however, is the manner in which some Harlemites living along Fifth Avenue utilized such a spatial imagining as a way to conceal its associations with Harlem. Hilton Clark, a City Councilman then living in the area under consideration, confessed that he used his Fifth Avenue address when hailing taxicabs “because they [i.e., taxicab drivers] don’t understand that it’s in Harlem” (as quoted in Roberts, 1988: B1). This confusion is likely the case in part because the house numbering sequence along Manhattan’s north/south avenues has not been standardized as have the cross-streets, so it is more difficult to immediately know where a given house number is located on an avenue (see Chapter 6). Clark had initially supported the measure to rename upper Fifth Avenue, but after the opposition gained ground, he decided to remain neutral in fear of political repercussions.

The debate over renaming Fifth Avenue signaled to city politicians that the African American community in Harlem could not always be conceived of as a homogeneous unit without internal contradictions. “What’s unusual,” noted one councilwoman, “is [that] it’s the black community that’s protesting it [i.e., the name change]” (as quoted in Roberts, 1988: B1). Although the existence of such “intra-racial” conflicts may have been a shock to politicians at the time, the presumption that the black community is always internally unified in its objectives and
conceptions of “blackness” is insupportable (Jackson, 2001; Taylor, 2002; Prince, 2004). The proponents of Marcus Garvey Boulevard, however, saw it differently. George Tait, one of the representatives of the African Nationalist Pioneer Movement that supported the name change, adamantly insisted that “I am certain [that] if these people [i.e., the opponents of the change] actually knew what Garvey stood for they would have second thoughts” (as quoted in Browne, 1988: 8).

Such a universalizing and essentializing view conceals the potential differences within the black community and ignores the fact that not all African Americans necessarily subscribe to Garvey’s black nationalist politics. Future research is required to fully understand the political dynamics involved in this controversy, yet based upon my provisional assessment, I suspect that opposition to the street name change had more to do with preserving the prestige of a Fifth Avenue address than with scruples over Garvey’s political philosophy, especially since the renaming of Mount Morris Park as Marcus Garvey Park did not entail the same level of bitter debate. Nevertheless, upper Fifth Avenue remains Fifth Avenue.

What is striking about the commemorative street names in Harlem dating from the 1980s is that they are all named in honor of African American men. It was not until the 1990s that several of Harlem’s streets were named in honor of African American women. The first street in Harlem to be named after an African American woman was Mary McLeod Bethune Place, also known as 134th Street, which was renamed in 1993 (Figure 7.8).
The proposal to rename one of Harlem’s streets for an African American woman was the work of a class of second-grade students at P.S. 92 (also known as Mary McLeod Bethune School). In the fall of 1992, elementary school teacher Syma Solovitch was giving a history lesson on the famous African American men honored with commemorative street names in Harlem when one of her seven-year-old students, Rondu Gantt, asked a simple yet perplexing question: “Why isn’t there any street in Harlem named after an African-American woman” (Allen, 1993: 33)? Gantt’s question led to a year-long class project not only to study the matter but also to lobby for such a commemoration. Solovitch and her students began by studying the achievements of African American women and eventually decided to choose Bethune
because of her distinguished career and support of education (Figure 7.9). The fact that their school was already named in her honor must have also been a consideration.

The measure was supported by the local community board as well as the City Council’s Committee on Parks, Recreation and Cultural Affairs. The bill was officially sponsored by C. Virginia Fields and various other councilmembers, unanimously approved by the Council, and signed by the Mayor in 1993 (Allen, 1993).

Figure 7.9: “Why isn’t there any street in Harlem named after an African-American woman?” (Allen, 1993)

51 Mary McLeod Bethune (1875-1955) was one of the most influential African American women of her generation. She founded the Daytona Normal and Industrial Institute for Girls (Daytona Beach, Florida) in 1904 and when the school joined together with Cookman Institute to become the co-ed Bethune-Cookman College in 1923, she then served as its president for nearly two decades. In 1935, Bethune also founded the National Conference of Negro Women, served as the vice president of the National Association for the Advancement of Colored People (NAACP), and also was an adviser to several U.S. presidents. For an informative account of Bethune’s achievements, see Hanson (2003).
1993; Bernstein, 1993). It is worth discussing in some depth the public hearings held by Mayor David Dinkins at City Hall concerning the passage of the Bethune street name bill, because the hearings illustrate the perceived inter-generational importance of commemorative street naming in constructing a spatialized social memory that is part of what Alderman (2002: 99) calls “the geographic fabric of everyday life.”

The first public hearing was held on November 12, 1993, yet the official signing of the law was postponed until November 22, because the elementary school students that had proposed the name change could not be present. At the first public hearing, Mayor Dinkins explained that he was “delighted” to point out that the Bethune street name change had been proposed by a second-grade class from Harlem (Public Hearing on Local Laws, 1993a: 10). He then went on to summarize Bethune’s many achievements, emphasizing her commitment to public service and education. Various other councilmembers also spoke in favor of the bill, with one noting that “this is an important step for this city” (Public Hearing on Local Laws, 1993a: 13). Another commented that when the elementary school students had come before the Parks Committee to petition for the street name change, they had creatively given “a very unique presentation in a song and dance manner” (Public Hearing on Local Laws, 1993a: 14). The Mayor concluded by explaining that the signing of the law would wait another week so that the students could attend.

The second public hearing, which happened to take place on the anniversary of President John F. Kennedy’s assassination, was attended not only by the elementary school students and their teacher. Also in attendance were members of the National Council of Negro Women, which Bethune had founded in 1935, the first
wife of Adam Clayton Powell, Jr., Manhattan Borough President Ruth Messinger, various councilmembers that had sponsored the bill (including its principal sponsor, C. Virginia Fields), the Mayor, and the media. Mayor Dinkins took the opportunity to praise the students for their hard work and stressed the importance of cross-generational commemoration. The dialogue between the Mayor and the students is worth quoting at some length:

THE MAYOR: . . . I sometimes say to people that everybody stands on somebody’s shoulders. You know, there’s nobody gets anywhere all alone. And so each generation sort of builds on that which others have done before them. You all understand that?
STUDENTS: Yes.
THE MAYOR: And so sometimes I will say to people that we all stand on the shoulders of people like Dr. Martin Luther King, Jr. and Malcolm X and Robert Kennedy and John Kennedy. Today is the anniversary of the assassination of President John Kennedy, today is.
And I will name people like that and never fail to talk about people like Harriett [sic] Tubman and Sojourner Truth, and Mary McLeod Bethune . . . . (Public Hearing on Local Laws, 1993b: 6-7).

Dinkins sought to acknowledge that African American women had contributed just as much as men to American history and should be commemorated accordingly.

The bill’s sponsor, C. Virginia Fields, also emphasized the need to recognize the important role that African American women have played, especially in leadership positions, with Bethune serving as a exemplary model for the next generation. Additionally, she saw the commemoration of Bethune via street renaming as both a lesson in history as well as civics for the second-grade class who had petitioned for the name change. As Fields put it:

[T]his is very special for several reasons, because we will be naming, renaming a street in honor of a great woman who did so much to provide not only leadership, but certainly added to the historical importance of African-Americans in this country.
But it’s also important because of the way in which it came about, the fact that the students themselves initiated this project. I think it has been, in my talking with all of the students, has been an important lesson certainly in history, but also civic. They have become very civic minded in their understanding of the process of getting things done. And I have been assured by each one of them that it will not stop there, that it will lead to other things. If they see problems in the community, why aren’t our streets clean, what can we do in order to do something about it; if they see other situations, they have now learned at least how they can become involved. So from that standpoint it’s a very important civic lesson and we look forward to more efforts from these young people (Public Hearing on Local Laws, 1993b: 8-9).

The name change itself was important, yet Fields viewed this not in isolation but as part of a broader effort to encourage Harlem’s youth to become leaders in their communities, following Bethune’s example.

More so than Dinkins or Fields, Councilmember Stanley Michels was very explicit in his condemnation of the exclusion of women in general, and African American women in particular, from the writing of American history. Michels explained that he, along with various other councilmembers, was “very enthusiastic” to co-sponsor the bill, because “those of us who have studied American history, know her [i.e., Bethune’s] rightful place and the fact that she has not been recognized for many years, her rightful place in American history” (Public Hearing on Local Laws, 1993b: 10). “Too often in American history,” he observed:

we find lack of women because the historians were men, I think, and therefore they didn’t give them their rightful place.

But Mary McLeod Bethune, I hope and pray, when the history books are rewritten to really start to be fair, they will give her her rightful place in American history, certainly rightful place in the history of our time, because she did so much (Public Hearing on Local Laws, 1993b: 11).
Michels also noted that Bethune “was . . . a great African-American woman, but she was also a great American and deserves a place” (*Public Hearing on Local Laws*, 1993b: 11).

There are several significant points worth making with respect to Michels’ comments. First, he emphasized the phrase “rightful place” a total of five times and in some cases twice within one sentence. His insistence that Bethune deserved a “place” had a double meaning, both historical and geographic. On the one hand, Michels hoped that Bethune and other women would be acknowledged, and therefore have a “place,” within history textbooks in order to recognize their achievements. Yet, he also saw the renaming of 134th Street as a way to quite literally give Bethune a “place” within the cultural landscape of New York City. Perhaps more importantly, although Michels acknowledged Bethune’s African American heritage, he suggested that her leadership contributions enriched life not only for African Americans but for *all* Americans. This rhetorical tactic, it seems to me, was a way in which to counter the argument that such street name changes inevitably lead the city to become racially and ethnically “Balkanized” (see Section V below).

After various politicians spoke, the students finally stole the show when they gave a group presentation, which is again worth quoting at some length:

BOY: This whole thing started with a question. That question was:
BOY: Why didn’t any streets in Harlem named after an African-American woman?
GIRL: We did research. We found that there’s not one street in Harlem named after an African-American woman, but there were many streets named after African-American men.
GIRL: We did not think this is fair. African-American women have worked hard to make that country a better place.
BOY: And they have also helped African-American men make things better.
African-American men and women have always worked together.

**GIRL:** We do not feel this is fair—Oh. We would like to name 134th Street after Mary McLeod Bethune . . .

**BOY:** Mary McLeod Bethune was a leader. Leaders don’t just sit around and wait for other people to make things better. They make it better . . . . And that is why we are here today, to follow in her footsteps.

When we learned that there was not one street in Harlem named after an African-American woman, we didn’t just get mad. We did something about it (*Public Hearing on Local Laws*, 1993b: 18-20).

They concluded their presentation by singing Nat King Cole and Irving Mills’ song, “Straighten Up and Fly Right,” the chorus of which includes the line, “cool down, Papa, don’t you blow your top.”

The students’ call for the commemoration of African American women in the Harlem city-text laid the groundwork for future commemorative practices. Within a year, a small segment of 5th Avenue and 125th Street was renamed Fredrica L. Teer Square (as well as National Black Theater Way) to commemorate the former Executive Director of the National Black Theater, located nearby (Feirstein, 2001) (Figure 7.10). More recently, in 2001 Manhattan Borough President C. Virginia Fields supported a movement to rename a section of St. Nicholas Avenue from West 111th Street to West 141st Street for Harriet Tubman. A local law was passed in 2002 that established both Harriet Tubman Avenue as well as Harriet Tubman Square.

The renaming of streets and avenues in Harlem is one way in which collective memory is constructed and spatialized through the production of a racialized and gendered cultural landscape. This movement to construct “spaces of recognition” for Harlem’s African American community occurred at a time when the fear of white gentrification displacing blacks in Harlem started gaining public attention. However, as Schaffer and Smith (1986) early recognized, gentrification in Harlem has largely...
been a black middle-class phenomenon. The works of Jackson (2001), Taylor (2002), and Prince (2004) support this general assessment.

In contrast, social commentator Mamadou Chinyelu (1999: 123) argues in his book, *Harlem Ain’t Nothin’ But a Third World Country*, that black gentrification is merely a front for the eventual “ethnic cleansing” of Harlem by what he calls “the Euro-American masters of capitalism.” Chinyelu succumbs to precisely the form of racial essentialism that Gilroy (2000) so convincingly critiques (e.g., making crude generalization about “the fundamental differences between African and European values” such as, “Europeans, for the most part, have not developed a spiritual sense . . . . Africans, on the other hand, have, as well as a physical life, a spiritual life” [Chinyelu, 1999: 178]). Chinyelu’s (1999: 177 and 183) solution to Harlem’s woes is
to “re-introduce our traditional African way of life to the masses,” which would include, among other things, the demands that “All European images portrayed as religious icons must be removed,” “The curriculum of the ancient African salvation schools . . . must be re-introduced,” “The wearing of beautiful attire specific to our culture should be encouraged,” and “The traditional African frame of reference and value system should be re-embraced.” This Afrocentric traditionalism, stemming in large part from the writings of Marcus Garvey, lends itself to a repressive authoritarian politics of cultural essentialism.

As Cornel West (1994: 145) argues, authoritarian movements have historically been based upon “a top-down disciplined corps of devoted followers who contained their rage in an atmosphere of cultural repression (regulation of clothing worn, books and records consumed, sexual desire, etc.) and paternalistic protection of women.” West maintains that black nationalists’ greatest fear is the messiness of cultural hybridity, which they counter with an exclusionary politics of racial essentialism. Chinyelu’s (1999: 5, emphasis added) rhetoric is quite revealing in this regard as he asserts that “the benefits of nationhood against other groupings will be the eradication of the identity crisis from which most people suffer in a pluralistic society.” Such harsh rhetoric lends itself, whether consciously or not, to a comparison with other projects of racialized annihilation (Russell, 1996).

Gilroy (2000: 13-4) contends that such appeals to a “frozen culture” of nationalistic tradition are often “a ready alibi for authoritarianism rather than a sign of cultural viability or ethical confidence. Indeed, the defense of tradition on these grounds [of racial and cultural essentialism] . . . open[s] a door to ultraconservative
forms of political culture and social regulation.” As I mentioned above, commemorative street naming may offer an opportunity for trans-racial and cross-generational solidarity, as in the case of giving Mary McLeod Bethune a “place” in the cultural landscape. Yet, to the extent that commemorations are motivated by an exclusionary politics of racial difference, they may actually prove extremely divisive (not only between “black” and “white” New Yorkers but also among various racialized “camps” as well as within the black community itself).

V. The Politics of Re-appropriating the Symbolic Landscape

In this chapter, I have considered two contrasting examples of the shift from number to name in the production of Manhattan’s symbolic landscape during the nineteenth and twentieth centuries. In the first case, property owners on the Upper West Side petitioned the city during the 1880s to rename the north/south avenues west of Central Park in a coordinated attempt to prevent Irish and German immigrants from devising their own names for the new streets and avenues in the area then known as “Shantytown.” The exclusionary impetus behind this project was made quite evident by its advocates. The project to rename the West Side avenues was very much a product of “real estate dreams” and speculative interests arising among the propertied class.

In contrast, the street name changes in Harlem during the 1980s marked a turning point in the history of public commemorations for African Americans in New York City and across the United States. The issue of cultural recognition took precedence over considerations of property values and real estate speculation. While the early name changes in Harlem honored African American men, there was then a
push to acknowledge African American women as well during the 1990s. The majority of these commemorative efforts were adopted, with the exception of attempts to rename Fifth Avenue. Harlem’s commemorative street names played an important role in legitimating the historical significance of African American leaders (especially men), with elementary school teachers using the commemorative streetscape as a pedagogical device to teach their young students African American history (although, as this chapter has shown, the students questioned such male-dominated legitimation strategies and themselves “made history” by successfully advocating to rename a street after an African American woman).

The aim of this chapter has not been to defend the “number” over the “name” (or vice versa) but rather to point to the spatial politics of both numbering and naming streets. Replacing numbers with names can both reinforce the status quo as well as be used to resist it (Alderman, 2000). It can be utilized as a utilitarian strategy to boost property values and add an aura of exclusiveness to a community, yet it can also serve as a device for rendering marginalized groups geographically visible. The question of exclusivity, as I have noted, deserves more consideration. As I maintained in Section III above, the renaming of the West Side avenues was clearly a geographical expression of cultural exclusion and proprietary control. One key question, however, is whether Harlem’s commemorative street names also lend themselves to legitimizing a form of spatial exclusivity based upon “race” or “ethnicity.” I have argued above that there is no single correct answer to this question, since it largely depends upon the larger political agendas that promote such spatial projects.
Some public commentators have been critical of commemorative street renaming and maintain that it results in a cultural landscape that is “Balkanized along ethnic and racial lines” (Haberman, 2002: B1). Problems often arise, for instance, when more than one ethnic group seeks to claim “ownership” of a given neighborhood. This was evident as early as the 1970s when a political battle broke out over renaming a street in Brooklyn the “Avenue of Puerto Rico.” After the bill was unanimously passed by the City Council in 1976, many of the Italian American residents in the neighborhood petitioned the Mayor to veto the street name change. “We’re Italian-Americans, but we’re Americans first,” asserted one opponent of the new name. Waving an Italian flag in front of City Hall, a group of Italian American opponents confronted the sponsor of the bill, Councilman Luis Olmedo, asking him what Puerto Ricans ever did for America. Olmedo responded by noting that “[t]housands of Puerto Ricans have died for this country,” to which one member of the opposition replied, “What about inventions, what did they invent” (Breasted, 1976: 41)?

The Mayor decided to veto the bill and the Council’s Parks Committee voted 9 to 1 upholding the Mayor’s veto. According to the New York Times, Olmedo was “furious” especially since the African American chairman of the Black and Puerto Rican Caucus, Frederick Samuel (who had sponsored the bill for Adam Clayton Powell Jr. Boulevard in Harlem a few years earlier), had not challenged the veto (Ranzal, 1976: 40). Olmedo took the matter so seriously that he immediately resigned from the Black and Puerto Rican Caucus and wrote Councilman Samuel an official resignation letter stating, “I believe that a matter such as this was one that, like your
bill to establish Adam Clayton Powell Boulevard, should have required [the] solidarity of all the minority members of the council” (as quoted in Ranzal, 1976: 40). This is a clear example of how a politics of racial difference can have significant political implications of social divisiveness (e.g., that a lack of solidarity over a street name change may result in the dissolution of larger minority coalitions). Gilroy’s anti-essentialism and West’s appreciation for cultural hybridity, I have argued, open a space for expanding the possibility of trans-racial solidarities in contrast to Chinyelu’s exclusionary politics of racial and cultural difference.

The cases discussed in this chapter illustrate that street names generally serve more than merely the utilitarian function of establishing a spatial regime of legibility demanded by government bureaucrats and geo-coders. Street naming is also used as a way of creating spaces of recognition as well as “places of exclusiveness.” While the city’s technocratic geo-coders would likely prefer the logical order of sequential street numbering over the commemorative naming of streets, so long as street names are not duplicated and the city’s house numbering system is kept “in order” (itself an impossible task), the geo-coding of the city-text will continue as if the world were a set of “objects” simply awaiting the advent of geo-spatial solutions to the complexity of urban life.
8. CONCLUSION:

TOWARDS A CRITICAL SPATIAL HISTORY

OF THE GEO-CODED WORLD

[W]e need to both historicize space and spatialize history. In other words, rather than solely providing an analysis of how the meaning and use of the word ‘space’ has changed over time—a useful analysis to be sure—we need to recognize how space, place and location are crucial determining factors in any historical study. This is a project of a spatial history.

— Elden, Mapping the Present (2001)

. . . a geo-coded world: a world where boundary objects have been inscribed, literally written on the surface of the earth and coded by layer upon layer of lines drawn on paper.


I. The Importance of a Critical Spatial History of the Geo-coded World

This study speaks to a number of contemporary geographical debates—such as the question of viewing landscapes as “texts,” the production of abstract space, and the intersection of governmentality studies and Marxian geography. In terms of its broader significance to the field of geography, one of the chief insights that I think this study offers is a deeper appreciation of the now-commonplace interest in the relations of knowledge, power, and spatiality. This is an often-cited theme, almost a cliché, especially within the subfield of political geography, yet too often political geographers reduce such an analysis to the study of political borders, social
boundaries, resistance, and the production of scale (e.g., Agnew et al., 2003). All of these themes are indeed crucial to understanding political geography, yet I would argue that they have limited geographers’ conceptions of precisely how governmental rationalities have been operationalized via spatial individualization. It is remarkable that virtually no political geographers over the course of the last two centuries have recognized the significance of house numbering as a strategy of governing the spaces of everyday life (yet see Curry et al., 2004; Curry, 2005). This is perhaps a testament to just how taken-for-granted this mode of spatial ordering has become even amongst the most “critical” of critical human geographers.

The second major contribution that this study makes is its critical engagement between governmentality studies and Marxian geography. As I argued in Chapter 2, I have sought not so much to incorporate the insights of governmentality studies into the discourse of geography as to explore the extent to which geography—as both a mode of “representing and intervening” in the world, to use Hacking’s (1983) memorable phrase—has been central to the emergence of governmentalities right from the very beginning. Although Foucault and subsequent governmentality theorists problematize the discourse of “political economy” as itself subservient to governmental rationalities, I have maintained that the geographic tradition of Marxian political economy (especially the work of Lefebvre and Harvey) still has much to offer to a critical spatial history despite some of its limitations.

In particular, drawing on Harvey’s work, I have suggested that a dialectical understanding of the production of abstract space provides the necessary theoretical tools to move beyond a static conception of governmentality. If one seeks to explain
the rise of house numbering in American cities during the latter eighteenth century, for instance, it is crucial to explore the economic role that city directories played within the business communities in such cities and the contradictions that constituted their production. In order to understand the decimalization of house numbering in the mid-nineteenth century, it is essential to take into account the creative destruction unleashed by real estate speculation and development. These are but two examples of the way in which a geographically-oriented Marxian political economy perspective can add to the historical richness of analyzing the geography of modern governmentality.

Thirdly, this study also provides a preliminary attempt at what I have been calling a “critical spatial history.” In doing so, I have drawn upon Elden’s call to “historicize space and spatialize history.” The project of writing a critical spatial history of the present is crucial to understanding how the ordering of space is central to the production of governmental power/knowledges. Critical spatial history traces the complex intersections of knowledge, power, and the production of space. The aim is not to privilege the spatial over the temporal but rather to explore how the ordering of both space and time are interrelated in myriad ways. The very production of “factual” knowledge itself becomes the object of critical inquiry for spatial history given the role that such knowledge has played in spatial individualization and totalization. Spatial history need not be monopolized by one theoretical framework alone, although it should be committed to bringing contemporary theoretical approaches to bear on historico-geographical analysis.
The formalism of the morphological tradition has long influenced accounts of the spatial organization of cities and towns among historical geographers as well as architectural and urban planning historians. The “Grand Manner” of the Baroque style—with its diagonals and distinct focal points—is often contrasted with the rectilinearity of the grid. Similarly, debates have raged over the competing merits of the straight line and the curve as well as the organicism of the so-called “unplanned” city and the rigidity of the methodically gridded plane. In the current study, I have contended that this traditional focus on competing morphologies, while not without merit, has lost sight of one of the most profound transformations of space in urban history: the emergence of house numbering as a general spatial practice during the eighteenth century and its consolidation as a taken-for-granted mode of spatial ordering during the nineteenth and twentieth centuries.

In terms of geometrical form, the dominance of the grid remains central to understanding Enlightenment and modernist modes of spatial organization—at both the urban and continental scale—but it was not geometry alone that gave the grid its calculative power. Rather, the combinatory effect of linking a gridded frame with the logic of sequential numbering is of primary importance to the spatial history of modernity. I have maintained that sequential numbering was more important than a strict adherence to the morphology of the grid when it came to the production of abstract geographical spaces from the eighteenth century to the present. It is for this reason that I have offered a theoretical framework for analyzing the production of spatial regimes of inscriptions and have emphasized spatial numbering rather than geometric morphology.
I have also critiqued the tendency in the geographical literature of reducing Foucault’s conception of government to a theory of the state, which limits such geographical accounts to a critique of state power rather than a broader analysis of non-sovereign forms of governmentality. In the governmentality studies literature more generally, there has been a shift away from the Marxian conception of dialectics, yet the present study illustrates the continuing relevance of dialectics to the analysis of geographical processes and the construction of spatial permanences. In stark contrast, most forms of non-dialectical thought (especially positivism and empiricism) lend themselves to the reification of socio-spatial processes into a fixed order populated by “things” that have “relations” with one another. It is this very project of non-dialectical spatial reification that has been the object of critical scrutiny in the present study.

The sequential ordering of space—which is not always synonymous with the geometrical gridding of space, although the two may coincide—has been a key spatial strategy to contain the dialectical processes of capitalist urbanization within the fixed order of logic and number. In eighteenth- and nineteenth-century U.S. cities and towns, the spatial project of numbering houses was often first proposed not by municipal officials but by the publishers of city directories. The city directory business, I have argued, was one of the major players in the establishment of governmentality beyond the sovereign state in urban America during the nineteenth century. While the federal census was taken once every ten years, privately-financed city directories were often published on an annual or semi-annual basis—requiring the door-to-door canvassing for names, addresses, and occupations of the heads of
households. As I have shown, the very individuals who supplied most of the information for such directories—servants, women, and children—were themselves excluded from the directory.

Early house numbering schemes consisted of a series of numbers given along one side of a street and then back down the other side. The alternate system of placing odd and even numbers on opposite sides of the same street became prevalent by the 1790s. Both of these systems, however, were based upon the principle of numbering already-existing houses and often quickly became obsolete when new houses were built or old houses torn down. In the early 1860s, a new system was developed in Philadelphia that provided one hundred house numbers per block and came to be known as the “Philadelphia System” of house numbering (also referred to as the so-called “decimal system”). Other U.S. cities, such as New York, soon adopted the Philadelphia System at least in part, and the shift from numbering distinct spatial “objects” to utilizing “theoretical” house numbers based upon fixed intervals (whether by block or street frontage) provided one more means of trying to administratively rationalize the ever-changing socio-spatial processes of modern life within a coherent and permanent order.

By the beginning of the twentieth century, house numbering had become one of the unquestioned functions of municipal government. However, the enforcement of house numbering ordinances proved difficult in large cities that had few inspectors to keep track of non-compliance. As the case study of New York City shows, there was a politics to the numbering of houses and competing claims to what constituted the most “rational” approach to ordering the cityscape. The unsuccessful attempt to
renumber houses along Manhattan’s north/south avenues during the early 1940s was a clear indication of just how political the technicalities of sequential numbering can actually be. Similarly, the conflicts between federal postal authorities and city officials in Manhattan over the question of vanity addresses support the claim that we should be cautious not to essentialize the position of “the state” as a monolithic agent with a coherent and non-contradictory agenda. Such a state-centered approach also fails to account for the various non-sovereign forms of governmentality that were often equally as important as the sovereign state when it came to constructing a spatial regime of inscriptions as the basis of a project to individualize and totalize targeted populations.

The numbering of houses and the publication of city directories were both attempts to construct urban spaces according to the logic of spatial legibility. The project to rationalize urban space through sequential numbering gave rise to the modernist metaphor of viewing the city as a “text.” The modernist conception of the city as text was based not upon the rhetorical analysis of textual narratives (as in the “new” cultural geography of the late twentieth century). Instead, the main focus related to what I have called the physical typography of the city-text. In other words, the cityscape was conceived of as a “text” that required adequate “page numbers,” an alphabetized “index,” and an overall coherent “page layout,” if it was to be a properly legible text. It is my contention that this typographical conception of the “layout” of the city-text is key to understanding the modernist project of constructing legible urban spaces.
Viewing the city as a text, therefore, is not limited to poststructuralist accounts of the urban. The fundamental question, then, is not: “Should we conceptualize the city as a ‘text’ or not?” but rather, “In what ways and for what purposes has the city been conceptualized as a ‘text’ historically and how have such conceptualizations sought to render urban space intelligible or unintelligible?” At the risk of oversimplifying things, we might say that the modernist view of the city-text sought to delineate a fixed and coherent textual “order,” whereas the poststructuralist account of the city as text has attempted to demonstrate the instability of any such attempt to impose a transparent legibility by emphasizing the multiplicity of narratives that make up the textuality of the cityscape.

Urban landscapes are, of course, more than merely “texts” since they constitute the spatiality of everyday life for urban inhabitants as well as the locations of capital accumulation, consumption, and government (or a lack thereof). While Marxian historians have generally been quite hostile to theorizing historical cityscapes (or the past more broadly) as “texts” (see Perry, 2002), the postmodern penchant for textuality need not be so threatening when one recognizes that most texts themselves are in fact commodities, which necessitates that we critically analyze the commodification of city-texts in capitalist societies. Some Marxian and empiricist critics of postmodern textualism and discourse analysis, however, often fall into the trap of constructing a false binary that sets “thought” or “discourse” over against the materiality of the so-called “real world” (e.g., Perry, 2002; Davies, 2003). Yet, Marx himself recognized that material products—such as commodities—are also abstractions, hence the notion of “concrete abstractions.” As Harvey (1999 [1982]: 260)
103) notes, for Marx “[m]ental conceptions of the world can become a ‘material force’ in a double sense: they become ‘objectified’ in material objects and materialized in actual production processes.” The Marxian theorization of concrete abstractions, I would argue, is congruent with a Foucauldian analysis of technologies of government, which I attempt to bring together with my analysis of “materialized epistemic spaces” and “spatial regimes of inscriptions.”

Where I part company with Lefebvrian geographical accounts of the production of abstract space is when power is conceptualized solely as a repressive force against the lived experiences of urban inhabitants, as we find throughout Lefebvre’s (1991 [1974]) Production of Space. Foucault’s insistence that power is not only repressive but also productive—in the sense that it produces new subjectivities, regimes of truth, and taken-for-granted spatial orderings—has proved more useful in my analysis of spatial rationalization. This is not to deny the repressive “moment” of both sovereign and non-sovereign forms of power but to also take into account the productive “moment” as well.

In addition to critically analyzing the spatial history of sequential numbering in the United States, I have also explored how this mathematical ordering has been contested in various ways. During the second half of the nineteenth century, there were numerous moral and aesthetic critiques of the numbering of streets (but not of houses). Critics maintained that numbered streets were impersonal, meaningless, unaesthetic, and an intrusion of practicality where aesthetic judgment should dictate the discernment of “good taste.” Street numbering was often condemned on principle,
and street names that glorified the nation, local heroes, geography, or proprietary interests were seen as more “appropriate” than adopting the utilitarian number.

Such arguments were not merely of an esoteric philosophical nature but were often articulated by property owners who had a vested interest in improving the value of their property by way of accumulating symbolic capital through the designation of prestigious street names as a mark of social and cultural distinction. A good example of this elitist appropriation of the cultural landscape was the case of the West Side Association’s successful attempt to rename the West Side avenues in Manhattan during the 1880s. Although the shift from number to name was, in this case, justified on aesthetic grounds, I have shown that it was also part of a larger elite project to prevent working-class immigrants from devising their own nomenclature systems for the Upper West Side’s streets and avenues, or at least preventing these informal naming practices from “sticking” to the cultural landscape.

The renaming of numbered streets is not always an elitist project but can also be utilized as a means for marginalized socio-cultural groups to commemorate their heroes and spatialize their socially constructed collective memories. I explored this process by examining the renaming of streets and avenues in Harlem to honor black civil rights leaders in the 1980s. This case study provides a useful counterpoint to the renaming of the West Side avenues and illustrates not only the racial but also the gender politics of street naming. What I have attempted to show is that the naming and numbering of streets is not an apolitical process and cannot be separated from the larger socio-spatial struggles of everyday life.
II. Limitations

Throughout this study, I have explored the politics and spatial analytics of governmental knowledge production with respect to the ordering of urban space from a historico-geographical perspective. My work is situated between what often appear as two competing traditions: Foucauldian governmentality studies and Marxian geography. In doing so, I have sought to demonstrate that these two intellectual traditions need not be mutually exclusive and have much to offer each other. In fact, it was precisely this feeling of creative tension in my own thought that led me to critically engage, as well as draw upon, the work of both Foucault and Lefebvre in the present study.

In the next section of this chapter, I shall discuss several potential lines of future inquiry for a critical spatial history. Before doing so, however, I would like to consider a number of limitations to the current study. If it appears that I have privileged the moment of governmental knowledge production and its corresponding orderings of space, I have done so partly because these processes have hitherto garnered so little attention from urban historians and historical geographers. By emphasizing this moment of socio-spatial praxis, I am not suggesting that knowledge production and spatial ordering should take precedence over all other moments. I do contend, however, that the circulation of commodities (and the various “moments” of that process) cannot be adequately understood in nineteenth-century American cities without also considering the city and business directory as well as the house number as technologies of government, the aim of which was to improve the “value of time” through the rationalization of space.

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While I do maintain that the production of geographical knowledge was central to the formation of modern government, I do not see this as giving primacy to “thought” over “material practice.” As noted above, my analysis of spatial regimes of inscriptions and materialized epistemic spaces is an attempt to illustrate how thought itself is a material practice, and conversely, that the materiality of the real is enmeshed in conceptual abstractions. Idealism and materialism, therefore, are both inadequate because they share a common commitment to the Cartesian dualism of body and mind.

One of the major limitations to the present study—at least when it comes to making generalizations—is its focus on the United States (and to a lesser extent on Europe). For instance, how did the imposition of house numbering regulations in colonial contexts differ from their adoption in U.S. cities during the nineteenth century? Did city directory publishers play as important a role in colonial India as they did in Mobile, Alabama? Under what conditions was street and house numbering adopted in China or Japan? When was the practice of house numbering first proposed in the various regions of Africa? The main reasons why I have not discussed these geographical differences in this study are chiefly pragmatic: (1) I had to narrow my research topic so as to finish the study in a reasonable time, (2) I am most familiar with the U.S. context since I grew up along the eastern seaboard of North America, and (3) so little work has been written on the history of house numbering in general that it was necessary for me to conduct a detailed investigation of archival materials, a process that was time-consuming enough with U.S. sources alone.
The regional focus of the present study certainly limits the possibility of theoretical generalization; however, such generalization is not the aim of this study. I am not searching for abstract scientific laws or universal explanatory powers. Nor is my aim to make global declarations about sequential ordering and the grid. Rather than making blanket statements about legible landscapes, I have analyzed the specificities of the spatial practice of street and house numbering as it emerged in particular U.S. cities and towns since the eighteenth century. Although this study is not a nomothetic project in search of scientific laws of socio-spatial practice, neither is it strictly an ideographic work committed to an empiricist epistemology. I recognize the theory-ladenness of all description and have therefore attempted to make my theoretical commitments explicit rather than repressing them in the name of scientific objectivity.

Another potential trap that I have attempted to avoid concerns the issue of spatial fetishism and what Lefebvre calls the “illusion of transparency.” Far too often the analysis of abstract spaces results in the fetishization of the legibility and coherence of such “systems” of spatial organization. Yet, as Lefebvre (1991 [1974]: 142) rightly suggests, if abstract spaces are indeed to be seen as “texts,” then they must surely be “over-inscribed” where “everything therein resembles a rough draft, jumbled and self-contradictory.” Urban spaces, in other words, are not reducible to the abstractions inscribed on their surfaces. The contradictions of everyday life cannot all be solved by a simple technological fix, although this has certainly not stopped the geo-coders from trying to construct the “totally administered world” so feared by Frankfurt School theorists (Held, 1980; Adorno, 1991; Horkheimer and Adorno, 2002
The best strategy to combat the spatial fetishism of the modernist discourse on legibility and transparency is, as Lefebvre pointed out several decades ago, to critically examine the production of space rather than merely interpreting such spaces as finished products. This study has shown that critical spatial histories of the production of abstract space require not only an account of real estate economies and industrial production but also a critical examination of the political economy of governmental knowledge production and the intersection of sovereign and non-sovereign forms of power.

III. Horizons of Potential Inquiry in Critical Spatial History

I would like to conclude this study by briefly outlining several lines of future inquiry for a critical spatial history. The list is meant to be suggestive, not exhaustive, of the possibilities available to geographers and other critical scholars of spatiality. One of the most pressing needs at present is to provide a critical spatial history, or historical geography, of what Pickles calls the “geo-coded world.” With the recent rise of geo-spatial technologies, there have been a number of federally-funded projects to delineate the history of Geographic Information Systems (GIS). Most traditional accounts have emphasized technological innovations, such as the Canada Geographical Information System (CGIS) as well as the early work at the Harvard Graphics Laboratory. Various scholars have critically examined the social implications of GIS, and a movement has arisen to advocate for a more democratically accessible Public Participation GIS (PPGIS) (for a concise overview of the above developments, see Schuurman, 2004). What I have argued, however, is that we need to situate the history of GIS within the broader history of geographical
knowledge production and spatial rationalization via a genealogy of technologies of government.

Especially in the context of urban management, the geo-coded dataset would be utterly worthless if the very same geo-codes had not previously been inscribed upon the surface of the urban space being “managed” by the computational geo-coder. It is through this type of self-referential system of inscriptions that a “correspondence” theory of truth has been operationalized. What would come of an urban GIS (or a city directory for that matter) if we were to tear down all the street signs and house numbers from every building in a city? What use would a municipal GIS be if we were to scratch off the serial numbers from each “object” within the “grid” of municipal services? It is precisely this realization that geo-coding is often inseparable from the physical reordering of “things” in a socially constituted abstract space that makes the project of a critical spatial history of the geo-coded world so necessary.

The history of street and house numbering, then, can be seen as fundamental to the history of the geo-coding of the world. The present study is no more than a provisional conceptualization of a critical spatial history of street and house numbering and much work remains to be done. What we need is a comparative analysis of street and house numbering that is global in its reach yet does not lose sight of local specificities. For instance, the ancient Japanese city of Kyoto had numbered streets centuries before Philadelphia or New York. Yet, in the Japanese city of Tokyo, many of the streets remain unnamed. Instead, the city is divided into a hierarchical system of districts which provides a frame of reference to those familiar
with its logic. While such a system may perplex foreigners, the existence of diverse frames of reference for organizing space demonstrates that the seemingly “rational” or “scientific” logic of the numbered grid is but one system among many (Barthes, 1982 [1970]).

We also still lack a critical analysis of how U.S. military forces have attempted to replicate the cultural landscape of New York’s numbered grid in the regions that they occupy around the world. For instance, when the U.S. forces occupied Tokyo during World War II, they imposed an alphanumerical street numbering system upon the irregularly laid out Tokyo cityscape (Trumbull, 1963; “Tokyo Addresses Still a Mystery,” 1967). The irrationality of such a “rational” plan was evident when it was discovered that “the American-named A Avenue was intersected by D Avenue not once but several times, making [the American] addresses meaningless” (Trumbull, 1963: 4). A more recent example is the case of the U.S. military base at Karshi-Khanabad in Uzbekistan, known as “K2” Airbase as well as “Camp Stronghold Freedom” (“Khanabad Uzbekistan Karshi-Kanabad (K2) Airbase Camp Stronghold Freedom,” 2005; “U.S. on Uzbek Terror,” 2005). The base was laid out as a grid with “street” names that include Fifth Avenue, Wall Street, and the Long Island Expressway. An entire historical geography could be written exploring U.S. military bases as cultural landscapes.

The approach outlined in this study also provides a model for critically analyzing how historians and historical geographers (myself included) are themselves heavily dependent upon the traces left in the governmentalized archives. I have pointed out that social historians and historical geographers rely heavily on city
directories as “sources” of historico-geographical knowledge, often without considering the spatial politics of how that knowledge was collected in the first place. In so doing, historians run the risk of approaching the past through the lens of governmental power/knowledges without subjecting that lens itself to critical scrutiny. I have advocated here for a critical spatial history that questions the production of such governmental knowledges rather than rearticulating them for a contemporary audience. The question of historiography and the archive, therefore, are key sites for a critical analysis of how the governmental rationalities of the past are appropriated as “objective” knowledge by contemporary historians and other scholars in the present. It is in this sense that traditional historians are themselves implicated in the transmission of the governmental power/knowledges of the past to the present generation.

Critical spatial history, of course, should not limit itself to the suggestions made above and should remain open to new insights and self-critique. It is my hope that the current study will open a space for further conversations rather than putting an end to discussion once and for all with the impossible “final word” on the matter of the historical geography of the geo-coded world. I will view this dissertation as a success to the extent that it achieves the effect of at least de-naturalizing the taken-for-granted spatial order of sequential numbering, thereby cultivating a spatial politics that takes seriously the banal and mundane practices of everyday life. I leave it to my readers to decide whether or not I have achieved this goal.

I am referring here not simply to the historian’s examination of the “accuracy” of a given source (in an empiricist sense). Rather, I am suggesting that a greater emphasis should be placed upon critically scrutinizing the spatial politics of the act of governmental knowledge production itself.
Returning the Gaze
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