

Reuben Rose-Redwood
Liora Bigon *Editors*

Gridded Worlds: An Urban Anthology



Springer

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*Reuben dedicates this book to his
grandmothers Lillian and Jewel,
and his mother Amber.*

*Liora dedicates this book to Guy
and Itush, be-ahava.*

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Chapter 1

Gridded Spaces, Gridded Worlds



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*... the grid is the dominant mythological form of modern life...
The grid, however, has a history that long predates modernity.*

(Higgins 2009, 6)

Abstract This introductory chapter provides an overview of interdisciplinary scholarship on the urban grid from a comparative historical perspective. Its general aim is to situate the current edited collection within broader discussions of the grid in urban history from antiquity to the present. In doing so, the chapter explores the political and economic rationalities that have informed the diverse uses of the grid as a mode of urban spatial ordering as well as the wide range of theoretical perspectives that have been brought to bear on interpreting the significance of the grid. In particular, we examine the relationship between the grid plan and political ideology; its role as a political technology of imperialism, colonialism, and the formation of the modern territorial state; and the various ways in which the production of “gridded worlds” has shaped the spatial imaginaries and everyday lives of urban inhabitants around the world. By examining the entangled histories of the grid, this chapter considers the variegated associations of gridded urban space with different political ideologies, economic systems, and cosmological orientations, and outlines the rationale for the present anthology of key writings on the urban grid as a way of taking stock of the existing literature in order to inspire new avenues of research on the past, present, and future of the gridded worlds of urban life.

Keywords Grid plan · Political technology · Spatial imaginaries · Urban design · History of urban planning

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Introduction

On February 28, 2003, the New Museum of Contemporary Art opened an exhibit entitled, *Living Inside the Grid*, which explored the diverse ways in which the “grid” had shaped popular culture and everyday life at the dawn of the twenty-first century. In the accompanying catalogue, the exhibit’s curator Dan Cameron maintains that “the imposition of the grid upon all aspects of human existence was an inescapable fact” (2003, 36). As a result, he argues, “the inhabited grid has become the irreducible sign of the world we live in today” (2003, 12). Cameron is not alone in framing the grid as the quintessential symbol of the “modern.” Art historian Rosalind Krauss, for instance, maintains that “the grid is an emblem of modernity” (1979, 52). Yet, as Hannah Higgins observes, the grid has served as a technology of spatial ordering for millennia in many different historical and geographical contexts and thus “long predates modernity” (2009, 6). However, while the grid is not unique to the modern era, the prevalence and scale of gridded spaces since the sixteenth century has led many commentators to view the grid as the quintessential symbol of modernity.

Given its ubiquity in multiple fields of human endeavor—from modern art, graphic design, and architecture to mathematics, cartography, and urban planning—the grid has acquired something of a “mythological” status in the modern spatial imaginary. On the one hand, the modern grid is commonly portrayed as marking a spatial and temporal break with the past. Yet, on the other hand, it is also seen as a universal spatial form with a continuous history dating back to antiquity. The “mythology” of the grid—both academic and popular—has generally been framed around conceptual oppositions between modernity and tradition, order and disorder, the planned and the unplanned. In such accounts, which have been repetitiously invoked time and again, the grid plays a leading role in the perennial narrative of civilization imposing “order” upon the chaos of the world. These narratives alternately cast the grid as a symbol of civilized benevolence, heroic monumentalism, economic rationality, or social control. Although the content and emphasis of such narratives vary, they share a common goal of searching for the *essential meaning* of the grid.

The search for the essence of the grid is nowhere more evident than in historical studies of the urban grid plan. As one of the most prevalent forms of urban spatial organization in world history, the urban grid has been viewed as a signifier of everything from imperial rule and authoritarian control to Enlightenment rationalism and democratic egalitarianism. In urban historical scholarship, the grid’s essence has typically been sought after by attempting to reveal the intentions and motivations underpinning its design or by determining its primary function. However, the architectural historian Spiro Kostof observed over two and a half decades ago that the motivations and functions of the urban grid have varied considerably. He maintains, therefore, that any effort to reduce the grid to a single political ideology is futile, since political ideologies, economic doctrines, and cultural ideals are “no more

natural to gridded patterns than to any other urban form” (Kostof 1991, 100). Similarly, urban planning theorist Jill Grant argues that the historical “record offers no simple correlation between a particular physical form and social patterns or aspirations” (2001, 221). Yet this has not stopped countless urban commentators from seeking to draw precisely such spurious correlations by making claims that the grid represents *this* political ideology or signifies *that* economic system.

The problem with these reductionistic arguments is not their reductionism alone but also that they are wedded to a representationalist conception of spatial form, which reduces the grid to a representation of something else that defines its meaning. Far more than a representation or signifier, the grid is a *world-making device* that literally brings new worlds into being through the partitioning of space-times. By moving beyond the endless debate over what the grid represents, we can develop a better understanding of how “gridded worlds” are performatively enacted through a wide variety of spatial practices. If much of the literature has subscribed to what we might call a hermeneutics of the grid—which poses the question, *what does the grid mean?*—viewing the grid as a political technology of world-making calls our attention to the pragmatics of the grid, thereby shifting the focus from the meaning of the grid-as-representation to the spatial practice of *gridding* and the worlds it both produces and destroys. Such a theoretical reorientation has significant implications for how we narrate the spatial history of gridded worlds, but, before we can fully understand its significance for future research, it is first necessary to come to terms with the different ways in which the history of the urban grid has been narrated over the past century.

Scholars from a wide range of fields have studied the grid, yet much of this work remains scattered in inaccessible academic journals and scholarly monographs. The aim of this book is to bring together key writings on the urban grid in a single volume to serve as an interdisciplinary anthology that explores the histories of the grid from multiple perspectives in a variety of urban contexts. In doing so, this collection seeks to challenge monolithic portrayals of the grid as a fixed spatial form aligned with a singular ideology by demonstrating the diversity of uses to which it has been put in indigenous, colonial, and postcolonial traditions of urbanism. By examining the entangled histories of the grid, this edited volume considers the variegated associations of gridded urban space with different political regimes, economic systems, and cosmological orientations in comparative historical perspective. This anthology therefore seeks to provide one of the first accessible collections of classic and contemporary writings on the urban grid as a way of taking stock of the existing literature in order to inspire new avenues of research on the past, present, and future of the gridded worlds of urban life.

Contrasting Perspectives on the Urban Grid

From the Search for Authentic Origins to Anti-Essentialist Critiques of the Grid

The use of the grid as a mode of urban spatial organization has long fascinated scholars from across the social sciences and humanities, who have drawn upon a variety of theoretical perspectives and methodological approaches to examine the place of the grid in urban history. Early studies of the grid plan took as their point of departure the assumption that “the straight line and the right angle” were features that distinguished “civilization from barbarism” (Haverfield 1913, 14). Such approaches often imbued the grid with moral qualities of civilized refinement and contrasted its geometric rectitude with the supposedly crooked immorality of the “primitive” Other. For instance, in his study, *Ancient Town-Planning*, published in 1913, British historian Francis Haverfield claims that “[t]he savage, inconsistent in his moral life, is equally inconsistent, equally unable to ‘keep straight’, in his house-building and his road-making” (1913, 14). The conflation of spatial form with moral order was one of the hallmarks of civilizational discourses on the grid, which served as a justification of imperial conquest and colonial settlement.

Much of the early scholarship on the grid adopted a diffusionist approach and sought to trace a continuous lineage of the grid plan back to its foundational “origin,” although some scholars at the time acknowledged that the grid was developed independently in different regions throughout the world (for a review of the literature on the origins of the grid in antiquity, see Castagnoli 1971 [1956]). One of the most paradigmatic examples of the diffusionist approach to tracing the origin of the grid plan is geographer Dan Stanislawski’s “The Origin and Spread of the Grid Pattern Town” (1946; see Chap. 2, this volume). Like most diffusionist approaches to cultural innovation, Stanislawski’s study presents the grid as “a one-time invention which has spread from its source region until at present it encompasses the globe” (1946, 105). The key question for the diffusionist is: *what are the immediate and distant antecedents of the grid in any particular case?* The ultimate goal of the diffusionist approach is therefore to search for the grid’s “origin” and reconstruct its lines of descent. Stanislawski provides precisely such an account by explaining the grid plan in Spain’s American colonies as a direct descendant of Greek and Roman planning techniques, which he suggests were adaptations of prior grid-based planning that can ultimately be traced back to the Indus Valley settlement of Mohenjo-Daro.

Although the Greco-Roman influence on Spanish colonization is well-established, the linkage that Stanislawski draws between the Greco-Roman grid and the earlier use of the grid in the Indus Valley is based on pure speculation. Yet this chain of equivalence—however speculative—is required for the “one-time invention” thesis to be sustained. The diffusionist argument also depends upon a denial of any evidence suggesting that the grid plan existed in places without a single line of descent from a common origin. It is for this reason that Stanislawski

dismisses evidence that the grid pre-dates European colonialism in the Americas, arguing in a related study that “there is no convincing evidence of any grid-pattern town in the New World before Cortes rebuilt Mexico City” (Stanislawski 1947, 97). This claim has been challenged by a number of subsequent scholars (Gasparini and Margolies 1980; Gasparini 1993; Low 1995; Smith 2007), while others have called into question the endless search for the “origin” of the grid (Pattison 1957; Johnson 1976; Butzer 1992; Rose-Redwood 2008). Some have gone so far as to argue that the “privileging of the ‘origin’ should be rejected as symptomatic of a metaphysics of essentialism” and instead call for a genealogical approach that is “concerned with the discontinuities, contingencies, reversals, contradictions, failures, and reformulations that have accompanied the use of the grid” (Rose-Redwood 2008, 43 and 54; see Chap. 3, this volume). This anti-essentialist, genealogical perspective suggests that the search for the essential meaning of the grid is ultimately fruitless, because “the ‘essential secret’ of the grid is that it has no essence” (Rose-Redwood 2008, 56).

The diffusionist quest for the “authentic origin” of the grid may have largely been abandoned, but scholars from different disciplines have developed a broad spectrum of approaches to studying the spatial histories of the grid. Many studies of the grid have embraced a formalist approach, which examines the spatial patterns of cities and the evolution of urban forms over time (e.g., Morris 1972; Vance 1990). Kostof’s *The City Shaped: Urban Patterns and Meanings Through History* (1991) is a classic illustration of the formalist paradigm, which combines a visually descriptive empiricism with a hermeneutics of meaning—hence Kostof’s emphasis on both the “patterns” and “meanings” of urban form (see Chap. 4, this volume). Like many commentators, Kostof (1991) contrasts the grid with other urban forms such as the radial system of Baroque monumentality, the curvilinear forms of the “planned picturesque,” and the irregularly-shaped layouts of the so-called “organic” pattern of urban settlement. However, what distinguishes Kostof’s account of the grid is that it offers a particularly forceful critique of essentialist interpretations of the grid’s meaning. Whereas many scholars have attributed a singular meaning to the grid, Kostof argues that such arguments are “fundamentally misleading” because the “motivation for the grid” has been multiple (1991, 99 and 102).

Kostof is especially critical of studies claiming that the grid represents democracy and egalitarianism, arguing instead that “the grid, far from being a democratic device employed to assure an equitable allotment of property to all citizens, was the means of perpetuating the privileges of the property-owning class descendent from the original settlers, and bolstering a territorial aristocracy” (1991, 99). He insists, therefore, that “the political innocence of the grid in the West is a fiction” (Kostof 1991, 99) and emphasizes the various ways in which absolutist political regimes—from China and Japan to Spain and France—have used the grid as a political technology of spatial ordering. However, Kostof does not claim that the essence of the grid is absolutist, or anything else for that matter. Rather, he emphasizes the *plurality* of motivations and uses for which the grid has been employed and calls attention to the “versatility of program within what it is possible to see as a simple-minded, uninspiring, unvarying formula” (Kostof 1991, 102). Kostof is thus quite dismissive

of those scholars who “blame the grid for the shallowness and callousness of urban experience” and follows geographer James Vance in proclaiming that the grid is “one of the great inventions of the human mind” (Vance 1977, 44–5, as quoted in Kostof 1991, 103).

From the Grid as an Instrument of Social Control to the “Cosmo-Magical” Pivot of the World

If Kostof ultimately presents himself as a champion of the urban grid, planning theorist Jill Grant (2001) offers a more cautionary tale of the “dark side of the grid” (see Chap. 5, this volume). Similar to Kostof, Grant is skeptical of claims that the grid is essentially “democratic” and “non-hierarchical” (2001, 220). Responding to the revival of the grid among New Urbanist planners during the 1990s, Grant contends that the grid is “more frequently associated with the concentration of military power and wealth rather than with egalitarian traditions” (2001, 220; for an overview of the New Urbanist reclamation of the grid, see Cozens and Hillier 2008). To support this claim, she examines the uses of the grid in societies where different forms of power prevail, which she defines as diffusing, centralizing, and globalizing modes of authority. While Grant acknowledges that the grid has occasionally been employed for egalitarian purposes, she observes that in such cases “what began as an egalitarian grid may well become hierarchical” as property ownership is monopolized into fewer and fewer hands over time (2001, 234). By focusing on the uses of the grid under different political regimes, Grant is concerned less with what the grid *represents* than with what *use* it serves as a spatial technique of power. One of the primary functions of the grid is its capacity to render urban space “legible” to a centralizing power (Grant 2001, 237; also, see Foucault 1995 [1977]; Scott 1998; Brown 2001). It is for this reason, Grant argues, that the grid has commonly been utilized as a spatial strategy of political control over colonized populations and occupied territories. Whereas some scholars have interpreted the use of the grid as an aid to colonialism in benevolent terms (Stanislawski 1946; Malverti and Picard 1991; Pinol 2003), Grant contends that the grid has more often than not been employed as a political technology of repressive power. “Thus, when we examine societies using the grid,” she maintains, “we cannot help but conclude that the grid has a dark side in as much as it has served so frequently as a tool of dominance and repression” (Grant 2001, 237).

The repressive potential of the grid as a mechanism of social and political control has been widely recognized by numerous scholars and other commentators, leading some to raise the prospect of “a growing totalitarianism of the grid” (Siegert 2015, 98). Even proponents of the grid plan have argued that “a tortuous street facilitates defense by individuals and a straight street lends itself to control from without” (Stanislawski 1946, 107; for further discussion of the use of the grid as a technology of state control and a tortuous street system as part of anti-colonial struggles, see Robinson 1990; Çelik 1997). This argument is generally attributed to Aristotle’s

Politics, in which he observes that the grid system of laying out dwellings in “straight rows is considered pleasanter and more useful for general purposes. But, when it comes to security in wartime, the opposite plan, which prevailed in ancient times, is thought to be better. For it makes it difficult for foreign troops to enter and for attackers to find their way around” (1998, 209–10, section 1330b/22–26). Aristotle therefore recommends a combination whereby “certain parts and areas are laid out in straight rows, but not the city-state as a whole,” so that “both safety and beauty will be well served” (1998, 210, section 1330b/28–30). In this account, the grid is simultaneously understood as a model of aesthetic beauty yet also a security risk.

Aristotle refers to the grid plan as the “Hippodamean scheme” (1998, 209, section 1330b/22), in reference to Hippodamus of Miletus, who is often erroneously portrayed as the “inventor” of the grid plan. In his study of Hippodamus, urban planning theorist Luigi Mazza re-examines Aristotle’s commentary on the grid and argues that Hippodamus’s primary contribution was to highlight “the association between grid and constitution, and to identify the political nature of planning practices” (2009, 114; see Chap. 6, this volume). More specifically, Mazza argues that although Hippodamus did not invent the grid plan, he appears to have popularized its use among the Greeks and his primary contribution to the early development of planning was to have developed “a zoning plan in which there is a *partial match* between the political organisation of the city (division into classes) and spatial plan (division into zones)” (2009, 123, italics in original). The Hippodamean plan, in other words, was an attempt to devise a system for the division of cities based upon the co-constitution of social and spatial order. Through his commentary on “Aristotle’s Hippodamus,” Mazza maintains that the socio-spatial partitioning of cities has played a crucial role in the constitution of political communities, where planning has served as an “instrument of social control through spatial control” (2009, 114). Kostof (1991) similarly suggests that the spatial layouts of military, refugee, and prison camps are prime examples of how the grid has been used as a form of social control.

However, this emphasis on the grid plan as a technique of social control is not without its critics. For example, Paul Carter argues that “the grid plan has not only been imposed from without: it has also been accepted from within. It has not only been a tool of authority: it has itself been accepted as authoritative” (1988, 210, italics omitted). In a similar vein, Michel Foucault maintains that the grid—and power more generally—is not only repressive but also a productive force, since it “produces domains of objects and rituals of truth” (1995 [1977], 194). As a technology of power, the grid operates by producing a field of “visibility” (Foucault 1995 [1977], 171), which has the effect of rendering space legible to facilitate governance at a distance. Yet it can also have the effect of producing new social and political subjectivities for which the “inhabited grid” is experienced as the taken-for-granted order of the world (Cameron 2003). The adoption of the grid as a spatial plan may occur through a combination of force and consent, which complicates reductionistic interpretations that conceive of the grid as a repressive force alone.

Scholarship on the grid is often prone to making broad generalizations about its representational and functional significance. However, the specificities of time and place clearly matter because the grid is a historico-geographical formation, not a timeless Platonic form (Carter 1988; Rose-Redwood 2008). Moreover, the grid is not a singular spatial object; rather, there are multiple gridded spaces in diverse locales and “the same form can be produced by quite different interests” (Marcuse 1987, 289). While it is tempting to view all grids as contributing to the repetition of the same spatial form, the grids of ancient Chinese imperial capitals are by no means identical to the military camps of the Roman Empire, the grid-plaza complexes in Latin America, or the gridded cities of the United States. If grids vary across space from one city to the next, they also differ temporally since a given city’s grid is not a fixed and static object but rather an assemblage of patterns and processes that change over time. In other words, there is always difference even within what appears to be a repetition of the same (Lefebvre 2004).

One of the primary distinctions that the neo-Marxian urbanist Peter Marcuse highlights is that between *open* and *closed* grids. As Marcuse explains, “the classic grid is laid out for a clearly limited area defined by city walls, fortifications, major outer termini for central streets, greenbelts, etc., whereas the open grid is laid out with a view towards expansion and reduplication, in one or more directions, theoretically without limit” (1987, 290–1). While the closed grid is clearly “bounded,” open grids are expansionary, “plotting an unknown and perhaps unlimited area capable of indefinite expansion” (Marcuse 1987, 291; also, see Pope 1996). Drawing upon Krauss’s (1979) terminology, closed grids can be understood as centripetal (inward-oriented) and are often directed toward a central focal point, while open grids are centrifugal (outward-oriented) offering the potential for limitless growth. Marcuse maintains that the urban grid has served different functions throughout history. In particular, he argues that the transition from the pre-capitalist to the capitalist era resulted in a general shift from closed to open grids, although as capitalist cities matured there were often competing economic interests at play in the implementation of the grid plan.

Following Marcuse, Kostof likewise asserts that “[t]he open grid is predicated on a capitalist economy, and the conversion of land to a commodity to be bought and sold on the market” (1991, 121). Some scholars, however, have questioned the universality of these claims. For instance, Grant challenges Marcuse’s argument that pre-capitalist grids are closed and capitalist grids are open, noting that there are “closed grids in contemporary gated communities within capitalist societies, while pre-capitalist communities like Teotihuacan feature open grids” (2001, 239). Complications also arise in other geographical contexts, such as the rapidly expanding open grids in the urban centers of the Sufi Mouride brotherhood in Senegal, which are integrated into the global capitalist economy through export-oriented, commercial agriculture yet are composed of gridded configurations based upon pre-capitalist Islamic spiritual practices (Guèye 2002; Ross 2006). However, even if the historical uses of open and closed grids are not as straightforward as Marcuse suggests, the very distinction between the two underscores the point that the gridding

of space is a differentiated process and thus the urban grid is not reducible to a monolithic and unchanging spatial form.

If Marcuse (1987) is primarily concerned with the political economy of the grid, others have focused more on the grid's symbolic power and its use by political rulers who have attempted to align their own worldly sovereignty with the cosmological forces of the universe at large. In his landmark study on the history of Chinese urbanism, *Pivot of the Four Quarters* (1971), historical geographer Paul Wheatley explores the "cosmo-magical" symbolism of ancient Chinese cities, where the centripetal, closed grid was designed as a microcosm of the heavens. More recent scholarship has also documented how the symbolic uses of the grid in ancient Chinese cities were of paramount importance. Architectural historian Jianfei Zhu (2004), for example, provides a detailed historical analysis of the "spatial strategies" employed in the making of imperial Beijing (see Chap. 7, this volume). He argues that Beijing's grid plan produced a space in which imperial ideologies were inscribed, symbolically articulating Confucian ideals of the sacred emperor residing at a "pivotal point that mediates and unifies the cosmos and the human world" (Zhu 2004, 34). Through an in-depth interpretation of ancient Confucian texts, Zhu seeks to demonstrate that the spatial plan of Beijing was an ideological representation that produced both a symbolic and functional space where cosmological principles and ideals of rulership could be translated into physical form. Framed in these terms, the grid is conceived as both a "symbolic representation" and a "functional practice" of ordering space at the very center of empire (Zhu 2004, 44). Similarly, prominent early Islamic cities such as Basra, Kûfa, and Al-Fustât/Al-Qāhirah were based on a closed grid plan, which contrasts with the popular Eurocentric perception of Muslim cities as "organic" and "chaotic." These classical cities, initially established as encampments, were configured as gridded residential quarters organized around a vast rectangular public square, symbolically comprising the Friday Mosque and the ruler's palace (Hakim 1986; AlSayyad 1991; Denoix 1992).

From Eurocentric Narratives of Urban Form to the Entangled Spatial Histories of the Grid

The use of the grid as a spatial strategy of imperialism and colonial expansion has been extensively studied. Much of the literature is Eurocentric in the sense that narratives of the grid often portray European colonizers as the active agents of history imposing grids upon passive colonized landscapes. The primary focus has been on the influence of the Greco-Roman grid as a precursor to the colonial grids that the European powers embraced as part of their efforts to colonize the world. To be sure, it is indeed the case that long before the age of European colonial expansion, the grid plan had served as a spatial template for Roman imperial settlement in Europe itself. Yet following the collapse of the Roman Empire, the "old gridded Greco-Roman cities [lost] their physical integrity or disappear[ed] altogether" (Kostof

1991, 108). Then, during the twelfth century, a new set of grid-plan settlements known as *bastides*, or new towns, were constructed across Europe and had increasingly become the norm, particularly in southern France, by the thirteenth century (Beresford 1967; Morris 1972; Kostof 1991; Stelter 1993). Much like the later fortified towns of the Renaissance, the *bastide* was generally composed of a grid enclosed by a wall for military defense, and the French adopted similar town plans for their early colonial settlements in West Africa and North America during the seventeenth century, where “military considerations” also played a significant role in town planning (Stelter 1993; see Chap. 8, this volume; also, see Sinou 1993; Pinon 1996). Historian Gilbert Stelter thus concludes that “the way in which these towns were used as agencies of territorial occupation and settlement in the New World was largely derived from the practice that European states such as France developed in securing and expanding their homelands” (1993, 210). Similar arguments have been made regarding the strictly European derivation of the grid in other regions of European colonization as well, such as East Asia and Sub-Saharan Africa (Culot and Thiveaud 1992; Soullou 1993; Goerg and de Lempis 2003).

The general assumption underpinning Eurocentric narratives of the grid is that European colonizers imposed grids on previously ungridded spaces, transforming the landscape into a *tabula rasa* upon which European colonial power was inscribed. The problem with this narrative is that indigenous communities—from the Americas to Sub-Saharan Africa—often had their own traditions of urbanism, settlement, and land use that long pre-dated European colonialism, and the entanglement between indigenous and colonial settlement practices generally resulted in the production of hybrid urban spaces. This was especially the case in South and Central America, where, as anthropologist Setha Low notes, there is considerable “archaeological and ethnohistorical evidence that many, if not most, Spanish American towns were built directly on top of or otherwise utilized the existing [indigenous] settlement patterns and buildings” (1995, 750). In her study of grid-plaza urban design in Meso-America and the Caribbean, Low challenges Eurocentric interpretations of the grid-plaza complex and contends that “the correspondence between the indigenous plaza forms and Spanish reconstruction is so well documented that the denial of its significance is startling” (1995, 750; see Chap. 9, this volume). Viewing the gridded spaces of South and Central America as solely a product of Spanish colonial rule obscures the indigenous influence on the spatial formations of Spanish colonialism in the Americas and thus perpetuates a colonialist reading of the grid (Low 2000).

Low’s (1995) critique of Eurocentric-colonialist interpretations of the grid has inspired other scholars to re-examine the spatial entanglements between indigenous and colonial planning traditions in different world regions as well. In their study of the planning history of Senegal’s capital city, Dakar, Liora Bigon and Thomas Hart (2018) highlight the limits of such Eurocentric narratives by demonstrating how the settlement patterns of the Lebou, a community indigenous to the Cap Vert peninsula in West Africa, became intertwined with the gridded spaces of French urbanism in colonial Dakar (also, see Chap. 10, this volume). Their work illustrates how the colonial grid did not simply erase indigenous landscapes and conceptions of place but rather resulted in a “multiplicity of hybrid forms of urban space.” In the case of

Dakar, central meeting places, or *péncs*, were an integral feature of indigenous settlements prior to colonial contact, and many *péncs* are still evident in the gridded spatial structure of postcolonial Dakar today. As Bigon and Hart explain, “the obstinate and vivid persistence of traditional Lebou settlement forms and toponyms beneath the orthogonal lines of the colonial system is remarkable, and the initial tension between the exogamous and endogenous planning cultures gradually turned into absorption and coexistence.” Geographers have long recognized that the cultural landscape is comparable to a *palimpsest* with different layers of material and symbolic culture intermixed in the morphologies of the city. Yet Eurocentric narratives nevertheless persist in much of the interdisciplinary literature on the urban spatial histories of the grid. Given the hybridity of spatial formations in postcolonial cities, it is crucial to move beyond reductionistic explanations of the grid that reaffirm colonialist discourses of European power while ignoring the myriad ways in which indigenous modifications of the land have literally been “woven into the grid” of the colonial and postcolonial urban landscape (Bigon and Hart, this volume; Ross and Bigon [forthcoming](#)).

One common trope in Eurocentric narratives of the grid in North America is portraying the pre-grid landscape as an untamed “wilderness” (Trachtenberg 1964; Sennett 1990; Cohen and Augustyn 1997). The grid is commonly viewed as an instrument to facilitate the mastery of nature, which is either understood as a sign of reason and progress or as the irrational imposition of uniformity by an arbitrary power. In his essay, “American Cities: The Grid Plan and the Protestant Ethic,” the urbanist Richard Sennett argues that the North American grid plan transformed the American “wilderness” into a neutralized space through the obliteration of the “natural landscape” in order to create a space of social control (1990, 272 and 274; see Chap. 11, this volume). Drawing upon Max Weber’s Protestant ethic thesis, Sennett contends that the use of the grid as a city plan resulted in the “denial of difference” through the act of “geometric repression” (1990, 278 and 284). Sennett likens the grid plan to the Protestant ethic, because both played a central role in “a story in which men create the very conditions and circumstances which they then feel to be cold and empty” (1990, 284). As a neutralizing and repressive force, he argues, the grid has radically transformed the North American landscape, sweeping away the last vestiges of the “wild” to make way for the impersonal, cold, and alienating spaces of modernity. In Sennett’s words, “[t]he American grid plans were the first sign of a peculiarly modern form of repression, one which denies value to other people and specific places by building neutrality” (1990, 284). Yet, as discussed above, the grid has not only been a force of repression but has also produced new taken-for-granted spaces of everyday life for urban inhabitants across North America and beyond.

The gridded spaces of North America have by no means obliterated everything in their path, even if that may very well have been one of the desired goals of such plans. For instance, New York’s grid plan of 1811—which Sennett views as an exemplary case of spatial repression—was indeed mapped onto the Manhattan landscape without regard for the existing topography. Yet, during its implementation, topographical concerns could not be avoided, especially in northern Manhattan,

which resulted in subsequent changes to the plan during the 1870s (Marcuse 1987; Scobey 2002; Ballon 2012). Moreover, although hills were leveled and wetlands filled, the topographical variation underlying Manhattan's gridded streetscape remains much the same today as it was before the grid was imposed upon the island (Rose-Redwood and Li 2011). Additionally, the indigenous pathway of Wickquasgeck—which would later come to be known by the settler society as Broadway—was also incorporated into New York's street grid and is just as much a part of the city's contemporary streetscape as Fifth Avenue or Martin Luther King Jr. Boulevard (Young 2015).

Viewing the grid plan as a spatial manifestation of the Protestant ethic, or any other mode of thought, reduces the multiplicity of spatial formations to a singular meaning, privileging the authorial intentionality of the grid's origins over its entanglements with prior indigenous landscape modifications or subsequent uses. While the designers of New York's grid plan sought to employ its Cartesian order as a means of instilling the discipline of economic rationality into urban life—not to mention establishing a standardized real estate market—the grid is not reducible to the intentions of its original designers alone (Rose-Redwood 2011; see Chap. 12, this volume). In his genealogical critique of scholarship on the grid, Rose-Redwood (2011) contends that this form of “morphological essentialism” has produced a historical mythology that repetitiously and uncritically invokes the “official” meaning of New York's grid plan based upon the designers' publicly-stated intentions. By contrast, he argues that the original designers of a city plan do not hold a monopoly on its symbolic significance, since it is through the everyday uses of urban space that the material and symbolic power of the grid come to “life” (Rose-Redwood 2011, 412; also, see Higgins 2009).

Throughout the course of history, the grid has been embraced by those espousing a diverse range of political ideologies, economic doctrines, and religious cosmologies as a means of re-ordering the world in their own image. Yet, as historian Kate Brown reminds us, one of the things that most adaptations of the grid have in common is the utopian dream of constructing the “perfectly-governed city” (Foucault 1995 [1977], 198, as cited in Brown 2001, 47). This dream of the sovereign grid in the governable city is utopian, because its vision of perfection can never be fulfilled. However, different political regimes have nevertheless continuously attempted to transform their utopian visions into reality through the spatial form of the grid. For instance, while the ideologies of the Soviet Union and the United States were diametrically opposed during the Cold War, both political-economic systems produced similar gridded spaces. From the prison city of Karaganda in Kazakhstan to the railroad town of Billings, Montana, the grid provided a common template for the spatial organization of the modern city (Brown 2001; see Chap. 13, this volume). Despite their differences, Brown argues that the gridded worlds of American capitalism and Soviet communism both “made a lasting stamp on the nature of the lives that took up residence on the plains and steppe” (2001, 46). These “gridded lives” were not merely passive recipients of the grid's spatial order. This is true even in the case of Karaganda, where the grid was literally constructed as a carceral space of control by the very prisoners who came to inhabit it. Over time, “the prisoners were

gradually given amnesty, the prison barracks were dismantled, the barbed wire was lifted, and, curiously, what remains is a neatly ordered city of broad avenues and shady sidewalks, monumental squares and symmetrically plotted parks, ample and verdant” (Brown 2001, 17). This example underscores the importance of considering the *temporalities* of the grid, rather than viewing gridded space solely through the lens of spatial fixity.

The temporalities of the grid are multiple. On the one hand, the grid has a history that dates back millennia; on the other hand, it has also come to be seen as “one of the hallmarks of modernity” (Geyh 2009, 69; Chap. 14, this volume). Literary theorist Paula Geyh suggests that the grid’s association with the “modern” is largely a result of the influence of René Descartes’s philosophy—especially “his most famous invention, the coordinate ‘grid’” (2009, 69)—on the rise of modern thought generally and modern science in particular. The Cartesian grid has been used as a technology of visibility and legibility in multiple domains of modern life. Although critics of modernity have sought to move beyond Cartesian modes of thought and practice, the coordinate grid remains “one of the primary modern conceptual structures found in the postmodern city” (Geyh 2009, 72–3). In other words, the modern grid does not disappear in the age of postmodernity; rather, as Geyh notes, it is reconfigured in both the “real” and “imagined” spaces of postmodern urbanism and the digital worlds of cyberspace. Drawing upon Gilles Deleuze’s (1997) theorization of the “societies of control,” Geyh argues that the grid is simultaneously a striated space of control and the very terrain within which resistance unfolds. Instead of abandoning the grid altogether, she insists that the making of smooth, nomadic spaces must necessarily also entail the creation of “more productive striations and grids” that reject the totality of the modern grid in favor of a more “open-ended order” (Geyh 2009, 84).

Gridded Worlds: The Need for a Critical Anthology on the Urban Grid

The literature on the urban grid is extensive and scholars from different fields of study have approached the grid from a broad range of perspectives. Diffusionists have searched (in vain) for a continuous line of descent of the grid from a singular “origin”; formalists have devised typologies to distinguish the grid from other morphological patterns; humanists have sought to decipher the essential meaning of the grid by decoding the intentionality of urban design; political economists have critiqued the use of the grid as a template for the commodification of urban space in the capitalist city; social and political theorists have examined the uses of the grid as a mechanism of social control and a strategy of asserting sovereign authority over populations and territories; and historians of empire have documented the many instances in which the grid has served as a political technology of imperialism.

These approaches, of course, are not necessarily all mutually exclusive, since most diffusionists have also subscribed to a formalistic conception of the grid, and most formalists have embraced a humanistic approach to understanding the meaning of urban forms. This diffusionist-formalist-humanistic approach to the grid was the predominant paradigm for studying urban spatial formations more generally throughout the first three-quarters of the twentieth century. Since the 1980s, however, the urban grid has not only been an object of study for specialists in the field of urban morphology; it has also become a topic of broader interdisciplinary interest, gaining attention from sociologists and anthropologists, political scientists and geographers, philosophers and literary theorists, historians and urban planners. This wider interest in the grid as a technique of urban spatial ordering coincided with the “spatial turn” in the social sciences and humanities, which emphasized the importance of space and place in all facets of social life. Given the significant role that the grid has played as both a mechanism in the capitalist production of urban space as well as a political technology of urban governmentality, Marxian and poststructuralist theorists alike have highlighted the significance of the grid as a spatial strategy of modern urbanism. Yet these contrasting perspectives on the grid have rarely come into direct dialogue with one another.

For much of the past century, different interpretations of the grid have largely been confined to their respective disciplinary silos, each with its own philosophical traditions and interpretive norms. It is our hope that by bringing together a diverse array of writings on the urban grid in a single book, the present anthology can serve as a bridge across such disciplinary divides and will hopefully inspire present and future scholars to cultivate a more transdisciplinary understanding of gridded space. The purpose of this collection is therefore not to solidify a “canon” of great works on the grid. On the contrary, the juxtaposition of contrasting perspectives on the grid in a single volume is meant to stimulate *critical* encounters across different traditions of scholarship and encourage readers to critically engage with—and move beyond—existing conceptions of the grid.

For this collection, we have included many of the writings discussed in the previous section with the aim of highlighting the diversity of approaches to theorizing the grid while also tracing common threads across different paradigms. Given the global history of the grid, we have made our best attempt at temporal and geographical inclusion—with studies examining the grid from antiquity to the present drawing upon a diverse array of case studies from Europe, Asia, Africa, and the Americas. They explore the grid as both an indigenous urban form and a colonial imposition, a symbol of Confucian ideals and a spatial manifestation of the Protestant ethic, a replicable model for real estate speculation within capitalist societies and a spatial framework for the design of socialist cities. By bringing together scholarship from history, geography, anthropology, sociology, architecture, urban planning, and literary studies, this anthology illustrates how a critical genealogy of the grid is not reducible to a singular narrative of global modernity but must take into account the multiple trajectories and entangled histories of urban differentiation that underlie the apparent sameness and repetition of the grid as an urban spatial form.

One of the commonalities shared across all of the contributions in this collection is a focus on the grid as an urban spatial formation. This can easily lend itself to a fetishization of “form” over “process,” which has led some contemporary urban theorists to call for the wholesale abandonment of studying different essential types of “settlement space,” which is to be “superseded by the analysis of sociospatial processes (constitutive essences)” (Brenner 2013, 98, italics omitted). We agree that the search for the “essence” of spatial forms should be abandoned; however, we are less convinced that socio-spatial processes are themselves reducible to “essences,” whether constitutive or otherwise. Instead, we seek to cultivate non-essentialist conceptions of both spatial forms and socio-spatial processes in order to develop more nuanced understandings of historical and contemporary urbanism. By way of conclusion, then, we would like to propose a number of interpretive reorientations that may inform future scholarship on the urban grid.

First, *one way to avoid fetishizing the grid as an urban form is to shift the focus from the grid as a spatial structure to the act of gridding as a practice of spatial reproduction.* This conceptual move underscores how spatial forms are temporal phenomena resulting from a myriad of socio-spatial processes. The practice of gridding entails the foundational acts of surveying, mapping, and partitioning gridded spaces, but it also involves the maintenance of such spaces through the repetitious enactment of everyday practices that normalize the “order” of the grid. The production of gridded space is thus not solely the result of a singular imposition of a spatial plan but is rather an ongoing process of spatial reproduction. The day-to-day reproduction of gridded spaces includes everything from the legal codification of land titles and the maintenance of infrastructural systems to the spatial narratives of popular culture and the habitual practices of urban inhabitants. Although the formal geometric qualities of the grid may appear equivalent from one context to another, the socio-spatial practices of gridding often differ significantly, which is why the grid has been interpreted as a symbol of contrasting political ideologies, economic systems, and cosmological worldviews.

Second, *the quest for decoding the essential meaning of the grid is a dead-end street and should be replaced with a critical analysis of the politico-economic and socio-cultural effects of urban gridding.* The ultimate dream of morphological essentialism is to uncover a foundational text in which the initial designers of a city plan clearly explain the precise reasons why they selected a given spatial form, thereby providing a definitive explanation of a plan’s meaning and significance. This desire for interpretive transparency is comparable to the conservative legal doctrine known as “originalism,” which is based upon the belief that meaning is stable over time and that an author’s original intentions define the meaning of a text. This originalist approach to hermeneutics might still have adherents in courts of law, but it is widely recognized as hopelessly naïve among most literary theorists, cultural geographers, and other scholars. However, when it comes to interpreting the meaning of the grid, urban commentators have nevertheless regularly privileged the “official” statements of city planners in an attempt to uncover the definitive interpretation of the grid plan. Of course, many scholars acknowledge that the meaning of spatial forms is multiple, not singular. Yet the obsession with the mean-