

LAFAYETTE PARK & THE CANOPYSPHERE: NATURAL LANDSCAPE AS URBAN DESIGN FRAMEWORK FOR PUBLIC SPACES IN LARGE-SCALE PRIVATE DEVELOPMENTS

Abstract

North American cities are in constant growth and expansion. Cities like Chicago, home of the fastest growing neighborhoods in America, face the challenges introduced by demographic expansion. Chicago is dealing with a social crisis, the result of decades of poor public policies and their relentless implementation. All this at a time of climate crisis at a global scale. The expansion of Chicago's urban landscape takes place in its abandoned industrial yards. These sites are large enough to attract private capital towards developing them into large-scale communities. Currently, these large-scale private developments are designed, and later assessed, by city authorities focusing on the building stock and sidelining their public spaces. Since there is no availability of tools to design nor assess these developments, their public spaces are but a byproduct and not the center of these private developments. The design of new large-scale private developments ought to adopt design and assessment tools commonly employed in parks. Should such design and assessment tools exist, which frameworks would its performance rely upon? The Canopysphere is a proposed architectural, landscape, and urban design framework concentrating strategies that harness the qualitative virtues of the tree canopy. For The Canopysphere framework, my research conducts a thorough case study analysis of Lafayette Park in Detroit. This 1956 large-scale private development is the brainchild of a collaborative effort between Ludwig Mies van der Rohe, an architect, Ludwig Hilberseimer, an urbanist, and Alfred Caldwell, a landscape architect. Through thorough and exhaustive digital photographic and video documentation of Lafayette Park, my research aims to catalog the different strategies which define The Canopysphere. These efforts are undertaken as an essential piece in crafting and assembling The Canopysphere as a design and assessment framework at the service of architects, landscape architects, urbanists, and policy makers.

Author

Alejandro Saldaña Perales
Illinois Institute of Technology

Keywords

Lafayette Park, private development,
public space, tree canopy, parks

Introduction

The present-day city of Chicago is the location of a unique cocktail of urban challenges. To architects, landscape architects, urbanists, as well as city authorities, the city's current expansion represents a grueling task. In a post-pandemic scenario, Chicago faces a crisis on two parallel fronts: On one hand, the ongoing expansion of its Central Area has exponentially increased the number of communities displaced and affected by it. These are mostly challenged Black and Brown communities which have been severely transformed by decades of disinvestment. At the same time, the current global-scale climate emergency demands a high degree of enlightenment over a number of environmental variables towards sustainable urban growth.

Located on the South Side of Chicago, Bronzeville Lakefront, a \$4 billion large-scale private development, faces the challenges mentioned above. Championed by diverse parties and stakeholders — ranging from local NGOs, real estate developers, and local politicians — Bronzeville Lakefront, amongst other like-minded developments, shows itself as a model for future urban expansion at the threshold of “a dual-crisis scenario” (Boone, 2021).

Enter the COVID-19 pandemic. If this enterprise wasn't difficult enough, the advent of COVID came to empower these challenges even more. When writing about the ongoing and future effects this pandemic has had over urban landscapes across the United States, author and urban scholar Richard Florida issued the following remarks: “As history demonstrates, the main effects will be to accelerate shifts already underway in how we live and work. Most of

all, the intertwined crises of urban America and the political movement that has grown up around them and in their wake create a powerful resetting moment when it is possible to remake our cities, suburbs and entire metropolitan areas as more just, inclusive and resilient places” (Florida, 2020). The author's remarks, although meant as a warning, are also soaked in optimism. It is then understood that this is a crisis we can overcome. The scale of this battleground is that of the urban. Therefore, the disciplines in charge of all efforts should be those best suited to the urban scale.

In his 2020 book *The Nation City: Why Mayors Are Now Running the World*, Rahm Emanuel shares his point of view in regards to the relationships of local city government policy and community-driven action. Emanuel's book implies the reliance of city politics on pragmatism; differing from the ideological narratives which stand at the core of federal or state levels. In doing so, the former Chicago mayor highlights the idiosyncratic values of urban scale politics, its scope, reach, and objectives (Emanuel, 2020). Indeed, cities are in a much better position to tackle both the social and climate crises due in part to the short distances between the local policy and their communities.

In most major cities all across the world, conscious responses to similar challenges are currently making headlines. The 15-Minute City, developed in Paris by Colombian-born urbanist Carlos Moreno, has achieved celebrity status since its inception last year (Crook, 2021). Over the past couple of years, it has been quite evident that most serious efforts in the collective quest to overcome social and climate disaster would come from cities. Their strategies are deeply rooted at the scale of the urban landscape.

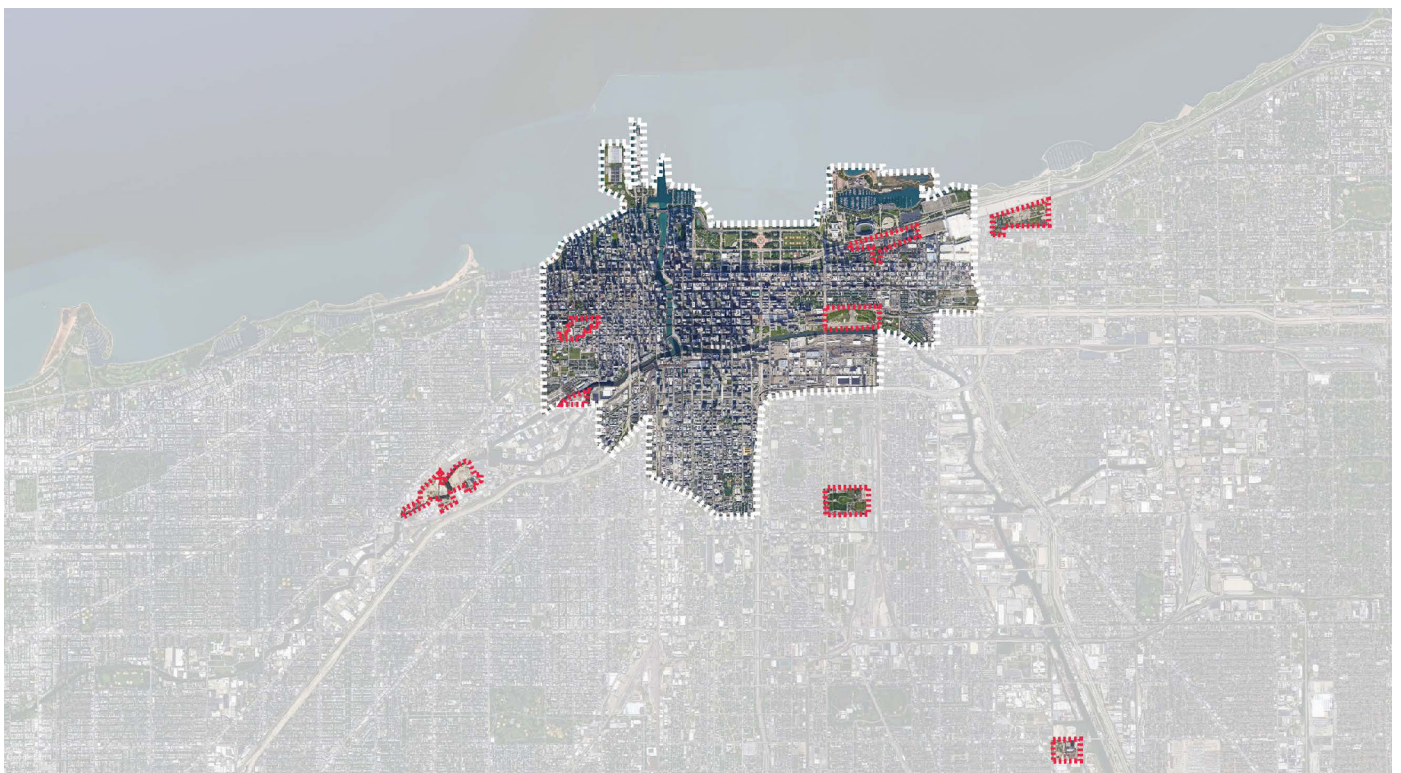


Figure 1: Satellite view of Chicago. Central Area highlighted. Current and proposed large-scale planned developments outlined in red. (Source: Author.)

Throughout its history, Chicago has been two tales of a city. Competing narratives describing its urban landscape often clash when seen from demographic, economic, social, and even architectural points of view. However, one must also understand the level of agency and control city authorities have over what happens in the city. Vertical analytical models, like the ones introduced by Prof. Neil Brenner from the University of Chicago, and more specifically the one employed by Prof. Derek Hyra from the American University in Washington, D.C., suggest other layers of factors to consider when understanding transformations at the urban scale (Brenner, 2019; Hyra, 2008).

In building what Spirou and Judd coined as The City of Spectacle, former Chicago mayor Richard M. Daley established the physical boundaries of two distinct urban landscapes (Spirou & Judd, 2016). Spirou and Judd's work is an assessment of an economic model, backed by Chicago, involving large urban transformation exclusive to the Central Area. New divisions were physically reinforced with the preexisting urban landscape of the Central Area. Similarly, these borders were carved in the minds of Chicagoans living in the neighborhoods outside the Central Area.

Nowadays, large-scale private developments in Chicago are spreading outside the Central Area. Most of them take advantage of the availability of abandoned industrial yards and brownfields located in between the Central Area and Chicago's traditional neighborhoods. These developments export an urban model in conflict with their immediate vicinity (Figure 1). The neighborhood urban landscape found adjacent to these developments, as well as their communities, displays signs of distress.

Chicago has plenty of experience with large-scale urban developments. Through the tenure of Richard J. Daley as mayor of Chicago, the city battled the challenges posed by the post-war urban flight and the de-industrialization of the North American urban landscape and economy. Chicago scholar Ross Miller recognizes the efforts undertaken by the Daley administration and his predecessors in order to maintain a stable tax-paying base and stop a potentially

catastrophic urban exodus. Miller's work also centers on the endeavors to upgrade the Loop as Chicago's response to the incoming talent and creative-based economy. According to the author, large portions of the blighted areas around the Loop were the ideal site to accommodate new urban development to serve those working in downtown Chicago (Miller, 2003). Today, the Loop and its adjacent community areas encompassing what is known as "Downtown Chicago" are the fastest growing in the United States.

Over the last 70 years, Bronzeville has suffered major transformations. These took place to satisfy — and in some cases induce — a similar demand of attractive urban neighborhoods for talented young creative professionals adjacent to downtown Chicago. By virtue of its strategic location just south of downtown Chicago, good transit options, immediately adjacent to Lake Michigan and the lakeshore, its powerful cultural scenes, and reasonable land values, Bronzeville introduces itself as an obvious choice for local, regional, and national migrant populations.

Over the last few months, public spaces are being re-evaluated as key components of the urban landscape. Regarding their recent path to stardom, Chicago-based architect Carol Ross Barney says: "I started out thinking that design will make a difference. As a kid, there were spaces that impressed me, that made my emotions change, and I was really aware of that power. I wanted to do that. But I had two epiphanies. One was that public space has a much bigger impact than other spaces. If you're going to make everyday life better, why not do it in public? The second was that I've always felt empowered working in the public realm, because I see myself as a part of a community and that makes me not only the designer but the client" (Mortice, 2021).

In the book titled *Landscape as Urbanism*, Charles Waldheim, professor of Landscape Architecture at the Harvard Graduate School of Design (GSD), proposes Landscape Architecture as the discipline to take command of contemporary urban discussion and conversations. Waldheim argues that Landscape Architecture comes in to fill in a void left "as urban planning shifted from design

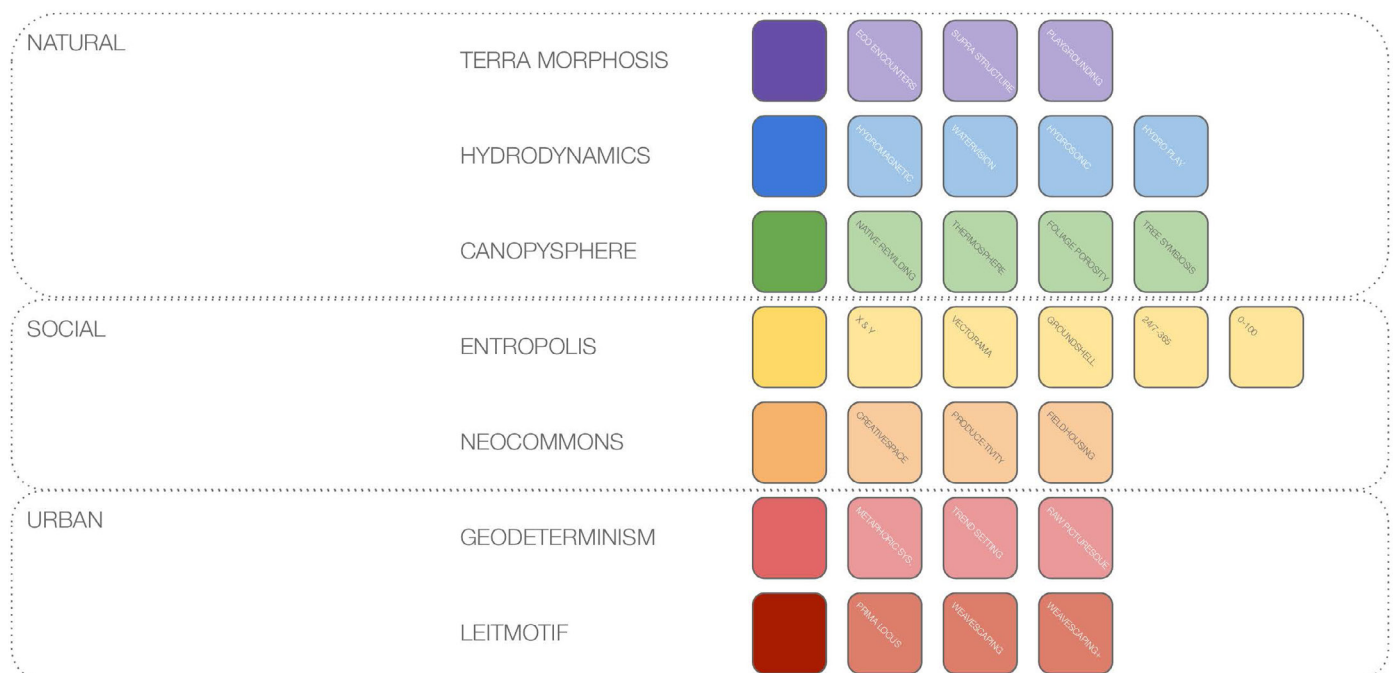


Figure 2: Public Space-centered Design Matrix. (Source: Author.)

to social science, and as urban design committed to neo traditional models of town planning” (Waldheim, 2016). In this work, Waldheim argues in favor of the idiosyncratic values of Landscape Architecture as tools towards urban expansion and growth.

Parks, thus public spaces and landscapes, are the organizing urban unit of Chicago. The combination of nature and the way it has merged into Chicago’s idiosyncrasy renders uniqueness to its case. Similarly, its citizens have been able to manage these resources and incorporate them into their lifestyles.

Methodology

My work puts forward a professional and objective strategy-oriented design matrix, centered around public space as a design framework to shape and assess new large-scale private developments in Chicago. This matrix is composed of seven frameworks grouped into three categories or scopes. Each framework, along with its theoretical composition and architectural attributes, was determined through extensive literature review. Similarly, literature review of each strategy provided clues towards selection of case studies to assess them individually (Figures 2 and 3).

For The Canopysphere framework, my research conducts a thorough case study analysis of Lafayette Park in Detroit. This 1956 large-scale private development is the brainchild of a collaborative effort between Ludwig Mies van der Rohe, an architect, Ludwig Hilberseimer, an urbanist, and Alfred Caldwell, a landscape architect (Figure 4). This canonic large-scale development has recently been re-evaluated in the work of scholars such as Prof. Charles Waldhiem, from the Harvard University Graduate School of Design, (Waldheim, 2016; Denny & Waldheim, 2020), Prof. Adalberto Del Bo, from the Politecnico di Milano, and Kevin Harrington, Professor Emeritus in Architectural history at IIT. Similarly, their respective students, my colleagues, are currently working hard to re-assess and re-evaluate Lafayette Park.

Lafayette Park was analyzed through extensive archival research and literature review. Its assessment identified four design strategies, ranging over a spectrum of disciplines such

as architecture, landscape architecture, and urban drawing. The strategies are then further classified into two parallel disciplinary fields; the ecologic and the programmatic.

Following, this research conducts interviews with experts, scholars, users, and stakeholders — recorded and transcribed. Finally, through thorough and exhaustive digital photographic and video documentation of Lafayette Park, my research aims to catalog the different strategies which define The Canopysphere.

Documentation of Lafayette Park will be performed using two parallel techniques. It begins with meticulous photographic documentation at eye level, as opposed to aerial or satellite imagery, with high-definition equipment to illustrate and carefully describe each strategy in the proposed Canopysphere framework. This activity is customized and is done with the purpose of defining and illustrating each strategy the way a person experiences the public space. Photographic documentation is primarily intended to perform as a policy document. In addition, it is meant to perform as a document to assist in the architectural, landscape, and urban design of a large-scale development.

In parallel, video documentation performed at three different times of the day — morning, afternoon, and evening — help to further elaborate on each of the strategies pushed forward by Lafayette Park. Moreover, video documentation emphasizes qualitative attributes which cannot be captured nor documented through photography alone. This technique is performed in such a manner that triggers an individual’s autonomous sensory meridian response — ASMR — audio visual stimuli. Such sensory-based documentation is performed with highly specific video and audio recording equipment, tailored for such tasks, and further enhanced throughout the editing process. Furthermore, this technique aims to be of greater service to architects, landscape architects, and urbanists. Yet, it has the potential to supplement photographic material within local policy documents.

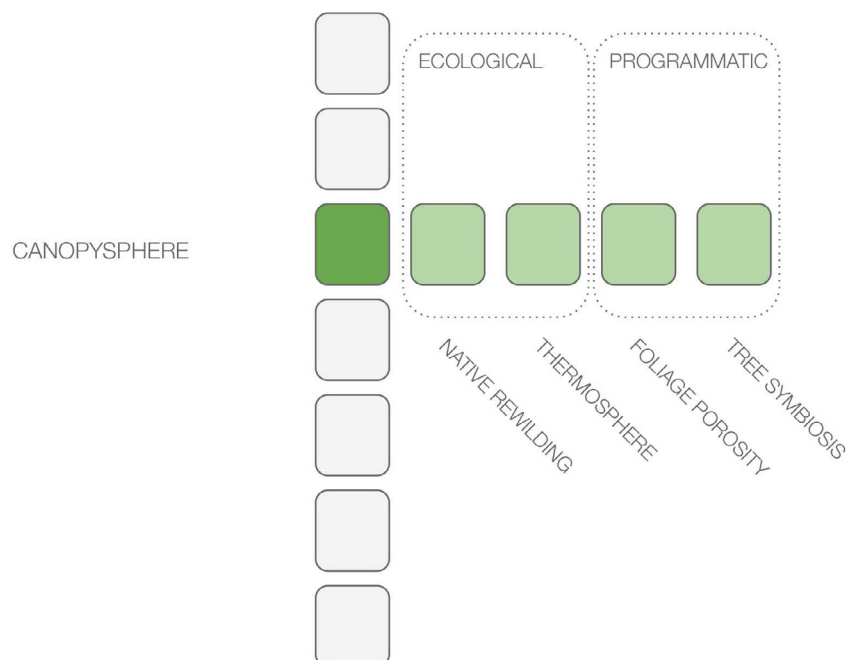


Figure 3: The Canopysphere framework research methodology. (Source: Author.)



Figure 4: Lafayette Park highlighted over a satellite view of Detroit. (Source: Author.)

These efforts are undertaken as an essential piece in crafting and assembling the design matrix at the service of architects, landscape architects, urbanists, and policy makers.

The Canopysphere

The Canopysphere is an organic layer or shell above ground through the urban landscape. It is defined through the architectural, landscape, and urban design framework concentrating strategies that harness the qualitative virtues of the tree canopy. The Canopysphere performs as an atmospheric layer over the urban landscape, nudging the design of large-scale private developments towards impacting the performance of the urban landscape.

The Canopysphere's first strategy is Native Rewilding. Emphasizing an ecological approach, Native Rewilding aims to reignite the site's ecological functions as core strategy via a minimum degree of intervention. It relies on the conscientious employment of native vegetation to assemble the urban landscape.

Native Rewilding is concerned and demands knowledge of the local ecosystems, natural landscapes, and resources, as well as climate patterns which play an important role in the function of the site. It highlights such attributes as a means to assign this strategy with a degree of agency and predictability over the emerging landscape.

In Chicago, efforts to regenerate the natural landscape, its ecological qualities and performance, have not only fostered the comeback of a site's ecological functions but also nurtured the social properties of formerly underperforming public spaces and parks.

Finally, Lafayette Park offers testimony not only to Alfred Caldwell's dominion of the local native ecology, but also its performance through the decades to come since its inception. Since the design of Lafayette Park's landscape was still limited by the scientific knowledge available to Caldwell in the late 1950s, Lafayette Park cannot be considered entirely as a "laissez faire" development. However, if one factors in such limitations one can understand the radical approach Caldwell's shaping of the landscape by igniting precise ecological functions, Lafayette Park becomes a pioneering development and urban landscape.

The second ecological design strategy is the Thermosphere. It calls for conscientious design of the tree canopy towards a diverse degree of thermal control of the urban landscape. The effects of canopy design over the urban landscape and human behavior are deeply intertwined.

In shaping The Canopysphere, this strategy targets the design of suggestive spaces, capable of suggestively having an intuitive effect on human behavior. Meticulous inspection of the image above reveals how tree canopy is providing respite to a tired walker and her pet from the scorching temperatures in place where canopy is absent.

Through this strategy, The Canopysphere becomes a tool allocating agency and control over the urban landscape's ground level. Through a human lens, it can shelter and set free the activities and life taking place underneath.

Now under a programmatic approach, Foliage Porosity performs as a strategy that asks for understanding of foliage and tree density, selectively shaping canopy, evoking behavioral responses to imply programmatic determination and shifts (i.e., public and private) through the urban landscape.

Considering both tree density and foliage density, Foliage Porosity constructs a tangible manifesto, under constant transformation throughout the seasons, of the programs and activities taking place at ground level. Similarly, its influence pours over the local wildlife, extending its programmatic effects towards an ecocentric performance of the urban landscape.

Lafayette Park reveals simple yet diverse porosities which assist in shaping the development's programming, regardless of its limitations as a private residential development. The public and private programs are clearly defined and are suggested through a spectrum determined by the site's tree canopy. Despite the limited programmatic layout of Lafayette Park, its canopy enables, through its visually striking design, the development of the daily life of a community and a city.

Tree Symbiosis is the last strategy in designing The Canopysphere. It invites collaboration and dialogue between tree canopy and adjacent structures and urban landscapes by performing as a threshold between landscape and buildings.

The development of public spaces often goes hand-in-hand with other public or private amenities which service an urban landscape. Their design ought not to become a competing endeavor but a collaborative experience and relationship which transcends design and falls into its daily performance. According to Professor Adalberto Del Bo, from the Politecnico di Milano, Lafayette Park shares the finest example of such relationships. It is here that a true collaborative spirit can be traced back to its inception by experiencing its landscapes (Del Bo, 2014).

Finally, Tree Symbiosis calls for a year-round relationship, capable of transforming itself according to similar performance and experiential needs of the built environment.

Conclusion

This research finds that cities are the vehicles propelling the most industrious strategies in the face of a global climate crisis and an increasingly divided society. In a polarized Chicago, the sites where these boundaries blur are where new large-scale private developments must shape buffer zones between two competing urban landscapes towards collaborative relationships. It highlights the importance of public spaces and their relationship to the overall performance of the contemporary urban landscape as a unified and living network. Furthermore, it finds that new urban developments can and must perform as ecologically resilient tools serving the communities they will attract and foster.

Lafayette Park in Detroit remains as a solid case study towards designing large-scale private developments. However, one must factor its various limitations:

- Its monochromatic program layout — entirely residential.
- Its role in the destruction of an ethnic minority community — Black Bottom.
- It remains in essence an incomplete vision and project.
- Its role as National Landmark may restrict its ecological, plus social, performance, and resiliency.

At the time of wiring, the research's next steps include:

- Schedule and plan the visits to Lafayette Park.
- Documentation of Lafayette Park according to the established protocol towards illustrating and defining each of the strategies in The Canopysphere framework.
- Determine framework overlaps during the assessment and documentation process of Lafayette Park.

Estimated time of conclusion of this research project is the 4th quarter of 2023.

References

- Boone, K. (2021, November 15). *Revisiting the Commons*. University of Toronto, John H. Daniels Faculty of Architecture, Landscape, and Design, livestreamed webinar, 1:02:04, <https://www.youtube.com/watch?v=ZPQSeqJBGm8>
- Brenner, N. (2019). *New Urban Spaces: Urban Theory and the Scale Question*. Oxford, UK: Oxford University Press.
- Crook, L. (2021, October 26). 15-Minute City Concept by Carlos Moreno Wins Obel Award 2021. *Dezeen*. October 26, 2021. Retrieved December 1, 2021, from <https://www.dezeen.com/2021/10/26/15-minute-city-carlos-moreno-obel-award/>
- Del Bo, A. (2012). *The Two Ludwigs in Detroit*. Unpublished. pp. 4–41.
- Denny, P. & Waldheim, C. (2020, June). Reconsidering Hilberseimer's Chicago. *Cogitatio*, 5(2), 243–248. Lisbon: Licensee Cogitatio.
- Emanuel, R. (2020). *The Nation City: Why Mayors Are Now Running the World*. New York: Knopf.
- Florida, R. (2020, July 2). The Forces That Will Reshape American Cities. *Bloomberg CityLab*. <https://www.bloomberg.com/news/features/2020-07-02/how-coronavirus-will-reshape-u-s-cities>
- Hyra, D. S. (2008). *The New Urban Renewal: The Economic Transformation of Harlem and Bronzeville*. Chicago: University of Chicago Press.
- Miller, R. (2003). *Here's the Deal: The Buying and Selling of a Great American City*. Chicago: Northwestern University Press.
- Mortice, Z. (2021, October). Newsmaker: Carol Ross Barney. *Architectural Record*. p. 26.
- Spirou, C., & Judd, D. R. (2016). *Building the City of Spectacle: Mayor Richard M. Daley and the Remaking of Chicago*. Ithaca: Cornell University Press.
- Waldheim, C. (2016). *Landscape as Urbanism: A General Theory*. Princeton, NJ: Princeton University Press. pp. 15–17, 107–109.