

**Lessons from the Garden City Movement:
Making a Case to Regionalize City of Toronto's Tower Renewal Program**

by
Enxhi Daci

supervised by
Teresa Abbruzzese

A Research Paper submitted to the Faculty of Environmental and Urban Change in partial fulfillment of the requirements for the degree of Master in Environmental Studies, York University, Toronto, Ontario, Canada

Submitted on July 31st, 2022

Abstract

The urban landscape spatially articulates diverse urban realities and historical trajectories of urban development, ideals and visions, and governance structures. Urban thinkers have often proposed utopian ideals of cities, which would alleviate the social issues of the society they were living in. Ebenezer Howard and his Garden City vision is a sustainable city utopia that offered an alternative to the industrial capitalist city. On the other hand, Modernist urban thinkers such as Frank Lloyd Wright and Le Corbusier championed car-oriented cities. The ‘tower in the park’ vertical city of Le Corbusier has deeply impacted the urban landscape of Toronto, and now more than 50 years later, these towers provide the largest proportion of affordable housing stock for low-income groups and newcomers. This paper analyzes the place-based Tower Renewal program of the City of Toronto, which sets to ameliorate the physical and social disparities that are disproportionately concentrated in tower communities. This paper proposes the 15-minute city as a 21st-century approach to the Garden City for the tower communities of Toronto, which helps to connect this place-specific initiative to broader economic and urban restructuring trends in the region.

Foreword

This major research paper is being submitted to partially satisfy the requirements of the Plan of Study for the Master of Environmental Studies (Planning) Program at York University's Faculty of Environmental and Urban Change. This paper brings together the knowledge gained from my coursework, internship experience, and research. As such, this major research paper relates to my area of concentration outlined in the Plan of Study: 1) Urban Planning; 2) Neoliberal Urbanism; and 3) Social and Environmental (In-)Justice. This paper analyzes urban planning as a practice predominantly in North America and its evolution under capitalist and neoliberal forces. Also, this research focuses on the social and environmental layers of the urban landscape by exploring tower neighbourhoods of Toronto to understand the legacy of this urban form, revealing the historical trajectories of planning practices, governance. This paper also critically examines Tower Renewal as a spatial strategy to mediate the exclusionary implications and environmental impacts of the "tower in the park" model. This paper is reflective of my interest in creating sustainable cities that are made equitable for all citizens.

Acknowledgements

I would like to thank all my professors and mentors that have shared their knowledge and guided me along my scholarly journey. To my supervisor, Teresa Abbruzzese who has guided and encouraged me since I was a first-year bachelor's student in Urban Studies, I am grateful for an always-stimulating conversation that helped me discover my passion for urban planning. I would like to thank my advisor Stefan Kipfer for his valuable and insightful discussions that enhanced my critical thinking and knowledge.

To my family and friends, thank you for your love and support.

Table of Contents

1.0 INTRODUCTION	1
2.0 RESEARCH DESIGN AND METHODOLOGY	4
3.0 EARLY TWENTIETH CENTURY PLANNING AND URBAN UTOPIAS	5
3.1 EBENEZER HOWARD – THE GARDEN CITY	6
<i>Howard’s Evolution of Ideas</i>	6
THE GARDEN CITY	8
<i>Materializing the Garden City: Letchworth & Welwyn</i>	11
<i>Garden City - Distortion</i>	13
<i>Critical Perspectives of the Garden City Model</i>	15
3.2 FRANK LLOYD WRIGHT - BROADACRE CITY	16
<i>Utopia or Dystopia?</i>	18
3.3 LE CORBUSIER- RADIANT CITY	19
<i>The Radiant City</i>	20
<i>Polarized Urbanity</i>	23
4.0 MODERNISM	25
FUTURAMA - THE RADIANT CITY 2.0	26
<i>Legacy</i>	27
5.0 CASE STUDY: TOWER RENEWAL	28
IMPLEMENTATION	30
LIMITATIONS	33
6.0 DISCUSSION	34
THE 15-MINUTE CITY - THE MODERN GARDEN CITY?	35
CRITICISM	39
15-MINUTE CITY IN TORONTO	39
15 MINUTE TOWER NEIGHBOURHOODS	41
7.0 CONCLUSION	44
REFERENCES:	47

1.0 Introduction

The built environment spatially expresses diverse urban realities and historical trajectories of urban development, planning traditions, and governance dynamics, shaping the ever-changing morphology of urban regions. Cities evolved from diverse social organizations of society - from a hunter-gatherer paleolithic society to a neolithic society, to more permanent settlements through the agricultural revolution (Mumford, 1989). Thus, the structure of cities changed in rhythm with societal changes. The industrial revolution produced radical cultural changes in Great Britain, Europe, and the United States, giving rise to the capitalist urban experience. With massive internal migrations from the rural areas to the city, where factories and jobs were located, the urban industrial landscape of the 17th century in Britain became overcrowded, polluted, and unable to adequately service the rapid population increase.

As the situation in the industrial city deteriorated, new hopes and dreams for a better urban environment were emerging. The Garden City of Ebenezer Howard pushed for the creation of new cities, away from the polluted and overcrowded industrial cities. At first glance, Howard's vision engaged in solving the urban ills of 19th century London by uniting components of the countryside with those of the city to create a new town-country city model. However, the Howardian vision encompassed more than the limited scope of the one Garden City, it aimed to create a regional 'Social City.' Howard's utopia never materialized in its full scope, but his vanguard ideas were adopted in different ways all over the world.

Years later, Howard's ideas became obsolete due to the profound changes that automobiles and automobility produced in the urban landscape. With the car becoming the preferred mode of transportation in western society, the cityscape changed to accommodate it. Le Corbusier's utopian city championed the use of cars, in a way that his Radiant City was envisioned as a city for cars.

As with the Garden City, the full scale of the Radiant city was never achieved; however, Le Corbusier's ideas might have impacted North American cities the most. Today, the 'tower in the park' concept, derived from Le Corbusier's utopian vision, has shaped the post-suburban North American landscape and in particular the Toronto region's vertical geography and history of urban renewal.

Whereas Le Corbusier urged for centralization, another architect and urban thinker, Frank Lloyd Wright, advocated for a decentralist approach. His utopian city of Broadacre called for the disappearance of urban centers and city life as we know it. Broadacre is based on the family unit in a way that pushed away households from society itself. Broadacre was never implemented in any form per se and has been faulted with encouraging and fueling trends of suburban sprawl and decentralization.

What we have today in the Greater Toronto Area are spatial fragments of Le Corbusier's "towers in the park" in isolated inner suburbs as idealized by Wright. The "tower in the park" model, which was a spatial strategy in modernist planning to achieve more equitable social conditions, provided housing for many car-owning, middle-class families in the post-war period. These towers currently make up most of the affordable rental housing stock in Toronto, providing essential housing for many low-income, racialized and newcomer families.

The Tower Renewal department in the City of Toronto has initiated an array of programs that aim to ameliorate the decaying inner suburban towers. These programs work with landowners and developers by providing incentives to transform postwar towers and their neighbourhoods into more sustainable and eco-friendly places. The different programs push for more energy-efficient towers; however, isolation due to the car-oriented design of these neighbourhoods creates inequalities and disparities that cannot be addressed by solely correcting the physical aspects of

the buildings. In addition, such a site-specific intervention does not address the racialized and gendered dimensions of everyday life in tower communities. Therefore, there is a need to rethink how to tackle social issues that residents of these towers are facing, especially in a post-pandemic world.

Some of the issues faced by tower residents pertain to isolation, which can be tackled by zoning bylaws that allow mixed-use developments to allow for grocery stores, healthcare centers, community centers and libraries to be located within tower communities. However, the Tower Renewal program - focusing on the urban form - lacks a regional vision that considers the underlying socio-economic conditions and spatial inequities contributing to concentrated poverty in tower communities. This place-specific measure also assumes that proximity and accessibility are keys to mediating isolation.

The Garden City vision proposed by Howard aimed to create a sustainable and economically prosperous region through the development of “Social Cities.” The main aim of this paper is to critically evaluate the Tower Renewal project, drawing lessons from the Howardian vision, and making connections to the 15-minute city vision that is gaining traction today in a post-pandemic context. The first section provides an overview of urban utopias from the Garden City, Broadacre City, and the Radiant City and how these visions have shaped early 20th-century planning. The second section of this paper will specifically focus on modernism and its uneven legacies in urban planning. The third section will present the empirical case study at the heart of this paper - the City of Toronto’s Tower Renewal program. This section will particularly highlight the limitations and potential of this place-based strategy in addressing the various social and environmental challenges facing tower communities. The final section discusses and makes a case for the 15-minute city vision to help connect this place-specific strategy to a broader regional

vision that can address the sociospatial and economic inequities. Finally, the paper concludes by recognizing the possible failures of the 15-minute tower neighbourhood as a gentrification scheme if not couched with state funding and strong policies to avoid marketization for profit gain.

2.0 Research Design and Methodology

When envisioning what a more socially and environmentally sustainable city could look like in the 21st century, I draw from Ebenezer Howard's (1902) influential text *Garden Cities of To-morrow*. In this book, Howard developed a model of city building that challenged the separation of town and country and offered bold proposals for an alternative socioeconomic system, where public land ownership was a basic condition. At the heart of Howard's regional vision of small-scale and self-sustaining communities was the integration of social, environmental, and economic dimensions when planning for a more egalitarian city.

Although Howard's utopian garden city vision eventually dissipated, morphing into suburbia in the twentieth century, elements of this vision disconnected from the alternative socioeconomic system he was proposing and continue to permeate as seen with New Towns, New Urbanism, and healthy city visions. In this research paper, I would like to engage with the environmental, and economic criteria of Howard's regional vision to critically evaluate the limited effectiveness of the Tower Renewal program in the City of Toronto. Tower Renewal is a place-based policy initiative that seeks to retrofit post-WWII modernist apartment buildings through various initiatives that focus on the physical structure of the buildings.

This empirical research is informed by a qualitative research approach that relies on textual analysis of Ebenezer Howard's *Garden Cities of To-morrow*, along with a literature review of secondary sources that discuss early twentieth-century planning traditions and modernism. The literature review informs my critical analysis of Tower Renewal as a site-specific measure that

does not adequately address uneven regional disparities in Toronto. Specifically, the literature review will synthesize the theoretical perspectives and concepts that will be used to critically analyze the impacts of Tower Renewal and the various initiatives under this program, addressing issues of social and environmental inequities in tower communities, and aging apartment buildings.

The paper establishes criteria based on key insights from Ebenezer Howard's regional vision of the "Social City" to critically evaluate the Tower Renewal program and possibly offer policy alternatives. Such criteria include:

1. Capacity for socioeconomic restructuring in tower neighbourhoods that would involve the concentration of jobs in the inner suburbs;
2. Local management and self-government;
3. Embeddedness of place-based initiative in broader regional vision and coordination of the Greater Toronto Area;
4. Promotion of regional environmental sustainability and equity;
5. Improved social and health benefits.

3.0 Early Twentieth Century Planning and Urban Utopias

The desire to imagine a better urban society, depending on one's conception of 'better', has been a topic of discussion since Medieval times. In fact, in *Utopia* (1516–17), Thomas More (More, 2014) coins the word 'utopia' to describe his version of an ideal place. More's utopia is an island with fifty-four cities each containing 6000 people, where family is the basic social unit (Miles, 2007). Utopias are creations that mirror what is considered ideal in the societies in which they are conceived. The search for a utopian society continues today.

In the planning world, many urban thinkers have drawn plans and written their version of the ideal world. The urban utopias realm of the 20th century is dominated by the views and contemplations of three urban thinkers, namely: Ebenezer Howard, Frank Lloyd Wright, and Le Corbusier. The ideal cities of these thinkers had one thing in common, the need to solve the problems of the urban landscape and social issues of the Western societies they lived in. This period is marked by a variety of changes, from industrialization to world wars and technological advances. These changes are reflected in the utopian societies conceived by the abovementioned urban thinkers.

The impact of industrial capitalism created a different urban environment, troubled by high rents, low wages, overcrowding, unsanitary conditions prone to diseases, pollution, and rural depopulation. Also, this new way of living deeply changed the social fabric of many societies. New towns were erected like the industrial villages of Saltaire, Port Sunlight, and Bourneville, founded by paternalist factory owners like Lever and Cadbury.

However, the utopian societies of Howard, Wright and Le Corbusier were different in terms of scale and the reformed society they wanted to achieve through the built environment. These conceptions, especially Howard's and La Corbusier's have deeply changed urban planning theory and our perception of an ideal urban environment.

3.1 Ebenezer Howard – The Garden City

Howard's Evolution of Ideas

Sir Ebenezer Howard was born in 1850 in London, in a lower-middle-class family. At the age of fifteen, young Howard began his career as a city clerk. At 21 years old, he decided to emigrate to the United States where among other places, he moved to Chicago. Interestingly, at

the time, Chicago was known as the garden city due to the extent of public parks provided. Here, Howard came across the idea of planned urban spaces through the works of Dr. Benjamin Ward Richardson (Beevers, 1988). In *Hygeia, A City of Health* (1876), Richardson, describes an imaginative presentation of principles of public health based on low density, good housing, open space, and underground railway (Richardson, 1876).

Upon his return to England, where he continued his work as a city clerk, Howard was in touch with issues of urban concern and with ideals of social reform. At this time, Howard became involved with middle-class London Radicalism.

The Radicals believed that Victorian England was not the best of all possible worlds; that the economic life of the nation was corrupt, inhumane, inefficient and immoral; that the political power despite the appearance of democracy was unjustly concentrated in the hands of a few....In the countryside, the near-monopoly of landholding by large owners was bankrupting the countryside. (Fishman, 1997, p.30)

Yet, the radicals differed from the Marxists as they did not envision social reform through the means of a violent revolutionary conflict. On the contrary, they would push the farmworkers back to the land by providing better living conditions outside the city boundaries (Fishman, 1997).

Howard's ideas of the Garden City were influenced by utopian socialists such as Henri Saint-Simon, Charles Fourier, Robert Owen, Eduard Bellamy, economists such as Alfred Marshall, as well as anarchists Peter Kropotkin and Élisée Reclus who devised different models of cooperative institutions, communities, and the spatial organization of cities (Hall, 2014; Paden, 2003). Henri Saint-Simon, Charles Fourier, and Robert Owen also proposed to redesign society through the promotion of cooperatives and welfare. Even though their proposals had differences in terms of scale, they did have several common factors, such as public ownership of land, limiting the private acquisition of wealth, end of economic classism and rationalization of industry (Hall, 2014).

Howard met Kropotkin, a political anarchist in London in the 1880s and 1890s (Hardy, 1991). "For Kropotkin, town and country were married, and regions of a country could become largely self-sufficient through diversified production, provided that industry and agriculture were practiced side by side" (Clark, 2003, p. 90). Peter Kropotkin argued that even though steam energy and the railroads had made possible the centralization of factories in cities, the age of electricity would allow for rapid decentralization (Fishman, 1997). Kropotkin builds the foundation of Howard's future Garden City.

Edward Bellamy was another inspirational figure that pushed Howard in envisioning the 'City of To-morrow'. In *Looking Backward* (Bellamy, 1887), Bellamy described his vision of a socialist utopia, which is located in Boston in the year 2000. Bellamy's utopian society has overcome all the social ills of the early 20th century European and North American cities. All industry has been nationalized and distribution is regulated by a sole entity; therefore, competition is non-existent. All citizens are employed in the 'industrial army' and received equal pay and retired by the age of 45. Howard confessed that after reading Bellamy's book, his imagination was swept away by it (Osborn, 1950). However, when creating his social city, Howard pushed back on Bellamy's authoritarian bias and the idea of extreme centralization.

The Garden City

Howard's ideas of a utopian social city were first presented in 1898 under the title, "Tomorrow: A Peaceful Path to Real Reform" (Howard et al., 1898), Howard prefaces that each town and country were magnets that attracted people for different reasons that were somewhat opposed to one another. The town attracts people because of a variety of reasons such as job opportunities that do not rely on seasons as opposed to the countryside. However, the rent prices are quite high in the town compared to the countryside. Moreover, the town offers a great level of

social opportunities, but at the same time distances people through long hours of work and commute. Cities are seen as overpopulated, polluted, and sunless - the opposite of the countryside.

The Garden City is portrayed by Howard as a third magnet that would combine all the positive factors of town and country magnets and solve the problems that inflicted each. The imagined Garden City extends into an area of 6,000 acres of farmland bought for the price of agricultural land value of the time, approximately £40 per acre. Regarding the planning context, the Garden City would be zoned to ensure environmental standards. On 1,000 acres, there would be 30,000 inhabitants, whereas the remaining 5,000 acres would serve as a green belt that would prevent urban sprawl. In case of population growth, another Garden City would need to be constructed.

The periphery of the Garden City would be zoned for industries that would be connected by a circular railroad to transport goods and people. The area would be divided into 6 wards, each with its neighbourhood centre and 6 boulevards that would traverse the city from the centre to the periphery. Each ward would encompass 5000 residents or 1000 families and each would be able to rent a home on a 20 by 130 feet lot. On Grand Avenue, schools and other institutions would be established. Walking towards the city centre, Howard has positioned the Crystal Palace, a wide glass arcade opening on the circular Central Park, found in the city centre and the main civic buildings. Crystal Palace is conceived as a sort of shopping mall where products are sold. However, Crystal Palace also serves in terms of market control as it would allow only one shop for each category of goods, and this would be possible through permission of space in Crystal Palace. Monopoly would be regulated through customers' satisfaction; if the merchant is not providing quality service, the space lease could be revoked.

Even though it was an attractive plan, most of the ideas had already been explored by other urban thinkers. What sets Howard's Garden City apart from previous plans are the scale and the economic scheme, and how this would be achieved without a revolution, but by setting an example. Howard argued that "Such a doctrine is consistent with the highest civilization, may be carried out without involving a community of goods, and need cause no very serious revolution in existing arrangements" (Howard, 1902, p. 88). Howard did not envision just one city, but a system of garden cities connected to a central city (with a population of 58,000 residents) through a railway system, creating socialist cities. Therefore, population growth would not surpass the set number of people, but this growth would be contained in a new garden city, also connected by the railroad. Howard's long-term plan was to create "town clusters - each town in the cluster being of different design from the others, and yet the whole forming part of one large and well-thought-out plan" (Howard, 1902, p.104). In short, Howard's 'Social City' vision was a complex regional plan.

As far as how to appropriate the land, Howard drew from the ideas of Alfred Marshall, who proposed committees be created to buy cheaper land and establish industrial districts, which would in turn increase the land value and profit (Fishman, 1997; Howard, 1902). At the heart of Howard's plan, and one of the most important points that Howard repeatedly conveys in "Tomorrow: A Peaceful Path to Real Reform" is the public ownership of land. First, the land where the Garden City would be built would be purchased by a group of investors that would have a sponsoring trust, where investors would have a rate of return of not more than 4%. The sum collected by the renters would then be used to buy back the land from the investors and pay the interest rate. With more people moving to Garden City, the land value would increase, and the rest of the rent income would be invested in the Garden City's built environment and when possible, provide welfare for the residents.

Therefore, private ownership of land would eventually disappear and be replaced by collective ownership; the citizens would continue to pay rent for community services. Finally, what makes the Garden City unique from other planning schemes is the fact that the Garden City did materialize in different forms, and at times with an array of modifications.

Materializing the Garden City: Letchworth & Welwyn

To turn the Garden City blueprint into a concrete structure, Howard and 12 like-minded followers founded the Garden City Association in June 1899. Six members of the group were part of the Land Nationalisation Society, and one, J. Bruce Wallace, was constantly searching for cooperative solutions to society's ills (Hardy, 2000). By the time the second edition of the book *Garden City of To-morrow* was published in 1902, the Garden City Association had grown to over 1300 members, including “the Bishop of London, several other clergy of various denominations, 23 members of parliament, a scatter of academics of whom Alfred Marshall was the most distinguished, and half a dozen industrialists, notably George Cadbury, Joseph Rowntree and W. H. Lever, the soap manufacturer of Port Sunlight. The Press was represented by Cecil Harmsworth, brother of the newspaper magnate whose Daily Mail gave useful publicity to the cause. Among the very few representatives, H. G. Wells was the most distinguished, but Marie Corelli probably still surpassed him in the minds of the general public.” (Beevers, 1988, p.79)

In 1903, a rural site of 3,818 acres was purchased as a private treaty by the Pioneer Company, then registered as First Garden City Ltd, in Hertfordshire, where the first Garden City of Letchworth was to be built (Howard & Osborn, 2006). At Letchworth, two young architects Raymond Unwin and Barry Parker were given the task to prepare a master plan and conceptualize a design for the buildings. They did so, by heavily relying on “a very English brand of socialism” as they admired the works of Edward Carpenter and William Morris (Hardy, 2000, p. 68).

In the beginning, development was slow and for about 10 years, it was not possible to build houses, shops, factories, or public buildings. Also, no dividend was paid to the investors until 1913, and then only 1% was paid (Hall, 2014, p. 103). Census data from 1905 showed that in Letchworth, the population was 1,400 people, which most of whom were middle-class men, women and skilled workers who were working in building the town. However, only 2 years later, the population doubled and reached 15,000 people in 1938 (Fishman, 1997; Hall, 2014, p.102). Also, the industry in Letchworth developed and by early 1950, Letchworth became the County's centre of non-agricultural industry (Hooson, 1958, p.204).

To limit and avoid land speculation and profiteering, the Letchworth Garden City Heritage Foundation Act 1995 was passed. The charitable foundation created through this act, the Garden City Heritage Foundation, was vested to manage the estate, and invest in ways that reflect the initial Garden City ideas (Lewis, 2015). "In 1967, the national Leasehold Reform Act allowed individual leaseholders of residential properties the option to buy their property from FGC Ltd., which had until that point insisted on retaining freehold ownership of the Letchworth Estate in order to control its development and to fund future investment in the town" (as cited in O'Sullivan, 2017, p, 170). However, these individuals cannot change the physical appearance of the dwellings without obtaining consent to do so (*Letchworth Garden City Heritage Foundation*, n.d.). "The case of the Letchworth Garden City demonstrates that structural market and economic forces are tenacious in guiding the implementation of reformist planning projects" (O'Sullivan, 2017, p. 173).

After the end of the first world war, Howard began looking for a suitable site for a second Garden City. In 1919, Howard found an area of 1,000 acres being auctioned near the village of Welwyn and used the same method to finance it as it was done in Letchworth. Welwyn Garden

City Ltd. was founded in 1920 and hired the architect, Louis de Soissons. Welwyn had the advantage of the Housing Act of 1919, which provided important financial support to build working-class buildings (Fishman, 1997; Lickwar & Thoren, 2020).

However, after and during the depression years, Welwyn Garden City Ltd. was in financial trouble; “the directors changed the memorandum and articles to exclude the garden city and its inhabitants from any future profits from the development or company – an abandonment of the fundamental financial principle of Howard’s vision...” (Henderson et al., 2019, p. 25). In 1948, Welwyn Garden City Ltd. became the Welwyn Garden City Development Corporation based on the New Town Act 1946, and in 1966 it transformed into the Commission for the New Towns (Yoshida & Koshizawa, 2003, p. 297).

Today, as in Letchworth, the Scheme of Management does not allow residents to make changes to the physical dwellings without approval; however, in Welwyn, this scheme is run by the local authority, which is a costly financial burden (Henderson et al., 2019). Census data from 2011 shows that the population of Welwyn Garden City is 59,910 people, which means that the population has doubled from the initial 32,000 residents envisioned by Howard for the Garden City scheme (*Nomis - Official Labour Market Statistics.*).

Garden City - Distortion

Through the years, the contextualization of the Garden City on an international level has been a topic of debate in the planning field; however, these garden cities show a distortion of Howard's model. The garden cities of France, Japan, Germany, Australia, and the United States morphed into suburbs and pushed for spatial reform town planning, rather than social reform.

In Japan, Den'en Toshi (Garden City) took root in the early 20th century. Yet, it did not champion Howard's ideals such as the shared ownership of land, rather it exemplified “bedroom

suburbs for white-collar workers who commuted to work in Tokyo and could afford the modern, Western-style houses that were surrounded by greenery and open space” (Low, 2013, p.10). In the American continent, one of the first and most publicized Garden City built in the United States is Radburn, New Jersey in 1928. This was possible because of the creation of the Regional Planning Association of America (RPAA), which was led by known figures in the planning world. Some of these figures included Clarence S. Stein, Lewis Mumford, Benton MacKaye, and Henry Wright. Also, Alexander Bing (a real estate developer) who had ties with the RPAA, formed the City Housing Corporation to call on investors who would sponsor the Radburn Garden City vision (Ward, 1992). Radburn was developed relying on the plan of Stein and Wright. Yet, Radburn was reinterpreted for the US context as a ‘town for the motor age’, or as Ravetz (2001) describes it, ‘garden city plus motor car’. In the Radburn plan, cars and pedestrian paths are kept separate from one another.

However, because of the Great Depression, only a portion of the planned community was completed and became a neighbourhood of Fair Lawn. In “Radburn Revisited”, Wright (1972) explains how a study by the University of Michigan compares the patterns of Radburn residents and those of the nearby Glen Rock neighbourhood in terms of walkability. The study showed that “47 per cent of Radburn's residents now shop for groceries on foot, whereas this figure is only 8 per cent for the neighboring unplanned communities” (p. 200). Also, the study showed that Radburn residents would use bicycles more often for utilitarian purposes, own fewer cars, and drive less for recreational activities. “Thus, it seems that in the terms in which Radburn was conceived as a new-type residential community, it was and is a success - this on the basis of evidence which is rather more than usually available” (Wright, 1972, p. 201). Yet, even though these transformed Garden City plans might be seen as revolutionary in terms of city planning, they

are a far cry from the intended vessels of social reform that Howard had intended the Garden City to be.

Critical Perspectives of the Garden City Model

Howard's proposal was conceived as a response to address the environmental and urban issues spawned by the Industrial Revolution. An unprecedented internal migration was taking place, where the countryside was being emptied and the cities were overcrowded, and not structurally ready to serve the sudden increase in population. These factors led to polluted, unsanitary, sunless cities with high housing prices that contributed to the deterioration of urban dwellers on many fronts, such as physical wellbeing. So, the garden city idea of marrying town and country can solve this problem by offering the country's health and nature and the town's opportunities.

Many planning agendas started to reject the idea of big cities and pushed for more spacious and sunny green spaces. In a way, the Garden City became a planning and environmental prototype, which did not aim for the social revolution that Howard intended. It did so by transforming into a suburban, anti-urban movement, with decentralization at its core. Clevenger & Andrews (2017) argue that the history of the Garden City as a city model should also be examined with a biopolitics and eugenics lens, as it served as a model to push for the Victorian reformer's biopolitical agendas. "He [Howard] drew from a socially constructed vision of healthy, "civilized" cultural habits and a bourgeois English nostalgia for pastoral spaces, housing, and social arrangements" (Meacham, 1999, as cited in Clevenger & Andrews, 2017).

3.2 Frank Lloyd Wright - Broadacre City

On April 15th, 1935, the renowned architect Frank Lloyd Wright showcased his vision of the ideal city at the Industrial Arts Exposition at the Rockefeller Center in New York. Ironically, his vision was fundamentally the opposite of the venue where the exposition was being held. In fact, extreme spatial decentralization and economic self-sufficiency were at the core of Wright's Broadacre City. Wright disliked the urban environment created in the cities, such as centralization, skyscrapers, and centralization of power in economic and political terms. The underpinnings of Broadacre City came as a response to the Great Depression on the machine age city; therefore, they were socio-economic, but also architectural.

In his book *The Disappearing City*, Wright (1932) describes a social and physical reality where centralization had disappeared, and individuality, democracy, and freedom were the keywords. The cult of decentralization is clear in Broadacre City, as homes and institutions would be sparsely located so as not to create any concentration or centres. All governmental institutions would be towers by the lake and would not be the focus of a community. Broadacre is based on the idea that each family unit would be entitled to a minimum of one acre of land, and there would not be rent or private ownership of land. All in all, Broadacre would have about 1,400 families in approximately 1,040 hectares of space with no distinction between urban and rural. However, these homes would allow for gardens and farms, which would make it possible for residents to become part-time farmers and return to the family base economy. Scattered throughout the city, there would be 15-storeys towers, cottages, and workers' quarters to be within walking distance from work. Offices would also be decentralized and smaller in scale, the advance in technology such as telecommunication would allow many to work from home. A single highway and railroad system would give access to Broadacre City. This low-density fabric would be woven together via a vast

roadway system and universal personal transportation in the form of automobiles and personal helicopters he dubbed “aerators” (Miles, 2007).

In other words, Broadacre City was Wright's representation of the highest form of democracy as Jefferson understood, it “was, in fact, the highest form of aristocracy, not a society ruled by its best men (aristoi), but rather a society in which every member would be the best of possible men [sic], as every individual would realize the ideal of Man [sic] in him or herself” (Dehaene, 2002. p. 95). This is what the decentralization aimed to achieve in Broadacre City, to regain freedom away from the old city, “After all he [sic] is the city? So the city is going where and as he goes, and will be gone where he may enjoy all that the centralized city ever really gave him plus the security, freedom and beauty of the ground that will be his” 2022-08-28 1:56:00 PM.

However, the embedded governance model of Broadacre does not embody democracy as it would dictate the freedom of organic architecture and planning. “There was no proletariat or upper-middle class, only an enlightened democratic throng, directed by the only aristocrat, the architect, in a system that might be called an ‘aristocracy’” (Alofsin, 2011, p.22). However, in Broadacre City, the country architect would be the most powerful ‘man’ with the role of a planner and the authority to enforce his decision. The country architect had the duty to design the road system, control land allotment (who should get land and how much) and control the planning and design proceedings. “This was the problem which he faced both in his theory of Broadacre City and in his attempts to implement his [Wright] plans” (Fishman, 1997, p. 143).

Here again, decentralization was a response to the non-ideal situation of urban centres, in terms of pollution and overcrowding. At the time of the publication of *The Disappearing City* (1932), urban planning in the United States was transforming the landscapes through land-use zoning, shifting space between home space and workspace and the introduction of automobiles.

With the rise of automobiles, came the rejection of urban life. Suburbanization expressed anti-urban values “and not only because of the natural/rural elements it managed to incorporate or express, but principally because its (and their residents) refusal to be part of the urban core, i.e., to be involved in its culture and to confront the urban problems in the city” (Vaetisi, 2013, p.5).

Utopia or Dystopia?

Depending on one’s ideals, Broadacre City might seem like either a utopia or a dystopia. Broadacre’s decentralized vision of the city embedded in individualistic ideals is seen by critics as the seed that spawned the North American suburbia. According to Watson (2019), Catherin Bauer was among the first critics to see suburban elements in Broadacre City and argued that Wright’s vision was not possible to have the town spread into the country and still be capable of preserving qualities of both. Broadacre did not resemble any city-like attributes, “Wright tried to envision an environment in which men [sic] would be free from the conforming forces associated with the city...” (Dehaene, 2002, p.92). On the other hand, some scholars argued that Wright did not push or create suburbia, rather he envisioned the outcomes of an urban trend that was already happening in the USA. “Broadacre City was an example of anticipating and following social trends (in Wright’s case, decentralization), attempting to project their environmental consequences, and giving them a rational and coherent form” (March, 1970, as cited in Grabow, 1977, p. 118).

Critics have argued that Wright, did not fully understand society and its many intricate issues. Broadacre perceives the structural forms and architectural ingenuity as the tools to solve all society’s problems. “The homes of Broadacre City may be of the most recent and efficient materials; they may be designed by the ablest architects - ‘integrated’ and ‘organic’ as Wright assures us will be, but all these are perfectly consistent with physical and spiritual decay”

(Schapiro, 2002, p. 88). Stephen Alexander in the socialist journal, *New Masses* criticizes Wright for not understanding the nature of political and social forces.

Wright appeared not to understand the means of obtaining the first principles of free use of the ground, ownership of utilities, government by the people, and fair subsistence for everyone. Without immediate political action, a mere drawing of blueprints for an ideal society made the project irrelevant and ludicrous. A practical solution would not jettison but use existing large-scale economic development for immediate needs while planning for a gradual modification toward a decentralized economy. (Alexander, 1935, as cited in Alofsin, 2011, p. 22)

Finally, in *The Disappearing City* (1932), Wright critiques urban society, centralized economic power, and bourgeois society, and yet, Broadacre City calls on the preservation of farmland and a way of living that “represented an undeniably bourgeois concept of pleasant and spacious living” (Grabow, 1977, p. 121).

3.3 Le Corbusier- Radiant City

Le Corbusier (born Charles-Edouard Jeanneret, Switzerland, 1887), has become one of the most influential and controversial urban thinkers of the 20th and 21st centuries. Le Corbusier was born in La Chaux-de-Fonds, a town of watchmakers and his ideas on city planning are similar to the way a watch or a machine works; every gear must run efficiently for the machine to function, and everything is coordinated with mastery. An architect by profession, Le Corbusier has influenced the urban landscape of numerous cities around the world. Yet, the dream of an entire city based on his beliefs was never accomplished. These beliefs were based on ideas of strict geometric forms, functionality, and order. By imposing this rigid logic on the social fabric of cities, lived experiences of city dwellers are perceived as and can be manufactured as products on the factory line. Not surprisingly, his architectural vision falls in line with this notion. He once proclaimed, “A house is a machine to live in”, (Le Corbusier, 1952). He also insisted that architectural products should be retained by mass-production methods (Le Corbusier, 1998).

According to Hall (2011), Le Corbusier planning ideas can be summarized in four points. First, because of the increasing size and congestion of city centres, traditional notions of the city have become obsolete. Second, to cure this congestion, there had to be an increase in urban density. Later, this idea was translated as the ‘tower in the park’ planning model. Third, there had to be a distribution of equal densities throughout the city. Lastly, Le Corbusier's new urban transportation system would divide different modes of transportation from one another; motorways and railways would be above the ground level, but below the levels at which people lived (p.51). The design and function of cities were important tasks that should be in the hands of experts, not in those of the citizens. Le Corbusier saw the planner’s role as that of a scientist - a surgeon that is not interested in humanity but focused on the problem-solving of the built environment. Similarly to Wright, Le Corbusier saw the planner-architect as the “natural leader of the society” (Fishman, 1997, p. 210-211)

In 1930 Brussels, La Corbusier participated in the Congrès Internationaux d’Architecture Moderne (CIAM) where the theme was to use architecture as an economic and political tool to improve the condition of the world. Here, Le Corbusier presented his ideal city, with green credentials of ‘vertical garden cities’. Also, during the fourth CIAM, Le Corbusier presented The Athens Charter, a document based on Le Corbusier's book of the Radiant City, which presented essential functions of a Functional city: work, leisure, zoning, high-rise blocks, and destruction of the current city layout. (Curl & Wilson, 2015).

The Radiant City

The conception of the radiant city was born in 1922 at the Salon d’Automne where Le Corbusier was asked to take part in a city planning design and to “draw a fountain in a square and...the skyline of a modern city” (Le Corbusier, 1967, p. 204). A couple of months later, the

Plan Voisin was created. This plan became the foundation for the Contemporary City and an extension of the Radiant City.

The book, *Radiant City* (Le Corbusier, 1967) or *Ville Radieuse* was a project inspired to redesign the centre of Paris, yet it aimed to build a new world. The Radiant City would provide a ‘machine-age city’ for a ‘machine-society’, through the destruction of the urban landscape and the build of a new city with high-rise buildings, which could make the increase of density on vertical lines possible. Le Corbusier thought of Paris as being sick and in danger and only designs completely based on geometry, statistics and engineering could save it. According to Montavon et al., (2006, p.2) Le Corbusier’s Radiant City had four main objectives, which include:

- “Provide effective means of communication,
- Provide a large amount of green area,
- Provide better access to the sun,
- Reduce urban traffic.”

The Radiant City would have a population of 1,000 people per hectare, through the increase of densities in cities. Even though Le Corbusier drew inspiration from the Garden City model, he pushed away from the creation of garden cities “with their mock nature” (Le Corbusier, 1967, p.107). One of the main points of a Radiant City would be to maximize daylight. Yet, a study implementing computer simulation to evaluate solar performance in Le Corbusier’s ideal city reveals that daylight performance in the skyscrapers of the Radiant city would have been poor and “the more random traditional pattern, which shows similar daylight potential and possibly higher density, might be a better choice” (Montavon et al., 2006, p. 6).

In the Radiant City, zoning is implemented. The Radiant City would have a symmetrical and standardized business centre, which would have 18 skyscrapers, governmental buildings, and

open space. In the housing section, there would be blocks of prefabricated apartment houses. Each block which Le Corbusier refers to as “Unités”, would be considered a neighbourhood with 2,700 residents and each resident would be given 14m² of space. Like Le Corbusier's unique house design, the apartment buildings would be placed upon pilots that elevated the building 5m off the ground. This technique was meant to make more land usable.

The buildings would cover 11% of the area and have rooftop gardens that could be used for different activities, even sandy beaches, and pools. According to Le Corbusier, 100% of the ground-level terrain would be exploited for the benefit of the pedestrian. Facilities and amenities such as daycares and gyms would be in the Unités and shared with residents; this would limit traffic and commute. City streets would move inside the buildings; each building would have 12-15 inside streets on different floors that would connect residents to all the amenities of the Unités.

Le Corbusier’s infamous claim of ‘death to the streets’ was a powerful underlying logic to his transportation plan. The plan thus included a concentrated multi-level system of various modes of transportation along linear axes, where ‘No pedestrian will ever again meet a high-speed vehicle’ (Le Corbusier, 1967 p.123). In fact, in the Radiant City, the pedestrian was to be segregated by level from automobile traffic and streetcar, which was also separated from trucks and heavy vehicles. “The street no longer runs alongside the house: the houses are no longer cliffs overlooking the street” (Le Corbusier, 1967 p.126). The disappearance of the street is the most criticized feature of the Radiant City, “by opening up the city, by abolishing the sense of compression generated by the street, he [Le Corbusier] was destroying the essence and excitement of urban life” (Dunnett, 2000, p. 72).

Polarized Urbanity

Le Corbusier is admired by architects but highly criticized by urban planners. Le Corbusier is one of many who aims to solve society's ills through shell buildings. Le Corbusier's thoughts on the social component of cities are highly contradictory; where he pushes for authority, organization, mechanization, and planning, he celebrates freedom, individuality, craftsmanship and spontaneity (Fishman, 1997, p. 260). Interestingly, La Chaux-de-Fonds citizens were "sturdy guardians of their local liberties, and for this were admired both by Proudhon and Kropotkin. Corbusier soon put that behind him" (Hall, 2014, p. 239).

Yet, to better understand Le Corbusier's urbanism, it is necessary to see him from the context of early 20th century Paris where he lived. Paris had been tyrannically torn down and rebuilt during the Haussmannization period. Yet, between the 1920s and 1930s, city authorities had given up on plans for urban improvements and chaos and exuberance were flourishing on the streets of Paris (Hall, 2014). The urban opposite realities of Paris are reflected in Le Corbusier's thought and urban perspective.

Le Corbusier's relationship with nature is often critiqued through his 'tower in the park' model. However, Dummett (2008), shows how Le Corbusier saw nature from different points of view during different stages of his life. Le Corbusier's understanding of nature and its relation to society is also contradictory.

Nature, for him, was both evidence of an underlying, primordial order and a terrifying morass of disorder; it was both a static image and a realm of experiential possibility; it was expressible both as a symbol encapsulating man's relationship with the universe and an empty green parkland between buildings; it was both a repository of profound spiritual meaning and a justification for the supreme rationalism of the machine. (Dummett, 2008, p. 216)

However, the complex relationship of Le Corbusier with nature should not be evaluated based on more recent scientific data on climate change and renewable sources, even though Le Corbusier

implemented ideas like green rooftops in his building designs, as these concepts would not have been available to him in a historical context.

In terms of social context, Le Corbusier draws from the Saint-Simonian tradition, which sees humanity as an industrial hierarchy and Fourier's "phalanstery which is the society as the perfect community to pleasure and self-fulfillment" (Jo & Choi, 2003, p.141). Le Corbusier's towers in the park were the reflection of a society run by technocrats, that neglected public participation, and thus was devoid of public space (Britain-Catlin, 2004). Richards (2007), clarifies that Le Corbusier had been influenced by thinkers, such as Fourier, Jean -Jacques Rousseau, but the most influential was Pascal's *Pensées*. Happiness is to be found in solitary introspection, Pascal says, as "the sole cause of man's unhappiness is that he does not know how to stay quietly in his room." (*Pensées*, 1670, as cited in Richards, 2007, p. 61). Le Corbusier was of the same idea regarding individual solitary, as he expressed, "a basic human need had to be fulfilled, that of personal solitude. When the door is shut, I can freely enter my own world" (Le Corbusier, 1967, p.9).

Le Corbusier is one of the most influential architects and urban thinkers of the 20th century. Even though, the Radiant City was never accomplished, which is not surprising as the plan consisted of tearing down the current faces of cities; similarly, in the Garden City, elements of the Radiant City have been extracted and reused. However, the legacy of the tower in the park, without any of the amenities, services, or transportation features of the Radiant City, has become the beacon of segregation, isolation, and paternalism. Le Corbusier's theories established the principles of Modernist architecture and city planning.

4.0 Modernism

According to Taylor (1998), in the topology of twentieth-century Anglo-American urban planning, there are three stages, and each stage is dominated by a particular approach. The first stage focused on architecture, and as we saw with Le Corbusier and Frank Lloyd Wright who were both architects, urban planning was seen as architecture on a town scale. The second emphasized scientific rationality. The third stage was dominated by politics where the town planner is stripped of his expertise and takes the role of the facilitator between the councillor's office and residents.

The second phase is “based on a view about the *object* that town planning deals with (the town, or the environment in general, was viewed as a ‘system’), whereas the rational process concerned the *process* of planning itself.” (p.159). Overall, there was a slow shift where town planning shifted from a form of art to an exact science. Planners in the second stage of the twentieth century rejected the architectural determinism that defined the first phase of urban planning. The idea that designing beautiful cities can produce happy and healthy citizens was criticized for its failure to address alienation, poverty, and equity. Rather, planners emphasized scientific and comprehensive rational planning approaches. Through these approaches, cities were seen as ever-changing and complex systems, and through scientific rationality, planners could become more neutral in development processes and decisions would be based on cost-benefit analysis versus philosophical or moral claims (Harvey, 1996; Paden, 2003). Unfortunately, the idea of “the public good” continues to be a conceptualization that inherently produces uneven consequences as there is not only one public, but multiple publics, needs, and realities (Young, 1986).

Le Corbusier's rational and functional city ideology, where the city was made to fit the automobile, not vice versa, captured the attention of General Motors (GM) and its supporters. General Motors had pushed its highway, car-centric urban landscape agenda for years, but the

collaboration with industrial designer Norman Bel Geddes in building *Futurama* 'Highways and Horizons' exhibit at the 1939-1940 New York World's Fair, might have been the most elaborate in shaping cities to fit corporate strategy and reconceptualizing citizens as consumers. "While the main goal of "Futurama" was to promote a positive image of General Motors, and thus increase its sale of cars, its key design aim was to transport the viewer gently and incrementally into an imagined future, albeit one which was dominated by the mass consumption of General Motors' automobiles and an unyielding ideology of technological progress" (Maffei, 2012, p.80). GM wanted to push the automobile as an essential component of the future, a necessity of daily life.

[Futurama - The Radiant City 2.0](#)

Under GM's sponsorship, Bel Geddes showed a near future utopia of the 1960s. The urban landscape of Futurama is a fusion of Le Corbusier's geometrical spaces with motorways connecting to towers in the park buildings and the decentralist approach of Frank Lloyd Wright's Broadacre City. Futurama is arranged by a large grid composed of superblocks and towers in the park and it suggested Futurama as a city without slums and social ills. "As a social vision, Futurama suggested that Americans all belonged to one big car-owning middle class, with technology carrying the entire population forward into a new world of affluence and freedom. Like the talented stage designer that he was, Bel Geddes arranged the scene before him without delving into thorny issues of power, economic inequality or social conflict" (Ellis, 2005, p. 59).

The exposition offered an immersive experience of Futurama as spectators were sitting in a round transporter belt that simulated the experience of flight above the 35,000sf city and regional model depicting farmlands and canyons.

At the culmination of their 'flight' around the future landscape, visitors stepped out of their 'plane' and into the model — a full-sized intersection of Bel Geddes's city of 1960. Walking on the raised walkways, they peered down onto the uncluttered 'boulevards' used to display very still and very quiet General Motors products. (Shelton, 2011, p.75).

Also at the end, the visitors were given a souvenir that read ‘I have seen the future.’ (Walker, 2016)

Differently from the previous three utopias explored in this paper, Futurama had the economic and technological power to be experienced and sold to the public. “Bel Geddes presented his ideas of the future with a remarkable degree of realism and immediacy, striking a chord with an American audience slowly recovering from the Great Depression and now longing for prosperity” (Morshed, 2004, p.75). Futurama was portrayed as the ideal city, the progressive and technological city of the future. “Today, it is perhaps best understood as a corporate-vernacular rendition of the automobile-centric modernist planning theories espoused in works such as The Athens Charter, published in 1943” (Walker, 2016, p. 108).

Legacy

Canada experienced rapid population growth during the post-war period. In the decade between 1946 and 1961, the population of Canada increased due to the arrival of refugees, war veterans and a baby boom. In fact, in 1961, the number had risen to 6.7 million (Owram, 2014). With the increase in population, the need for housing also increased. As mentioned, planning as a practice at this time was expert-driven and informed through scientific rationality, thus modernist themes of Le Corbusier’s functionality made their way into Toronto’s landscape. Downtown neighbourhoods were being demolished to open space for high-rise developments, office towers, and expressways.

Therefore, planning in Toronto focused on the:

[L]ow-density and functionally and socially segregated suburb; the high accessibility city criss-crossed by expressways; the renovated downtown made of high-rise buildings and open plazas; the redeveloped inner city composed of apartment towers surrounded by green space; and a planned metropolitan region structured by new towns and green belts. (Filion, 1999, p.423)

According to Caulfield (1994):

Toronto's growth was supported through means of public policy by all three levels of government: the federal government saw city building 'as a Keynesian vehicle for national economic recovery', the Ontario government aimed to strengthen the industrial economy, and provided massive funding for the public works required to accomplish this task (and, in Toronto, created the city-suburban metropolitan federation tailored to oversee infrastructural development), finally the municipal government identified development as a tool for local economic growth. (p.43)

Toronto's unique landscape consisting of "towers in the park" reflects the predominant feature of postwar urbanization (ERA Architects et al., 2010; Stewart, 2008). High-rise dwellings were not a new form of architecture as they have existed since Roman times. Yet, the implementation of the grid pattern with the car-oriented vision of development, and apartment clusters created a new urban pattern. Embedded within this modernist form of housing were egalitarian principles of affordable housing for all. As Stewart (2008) states, "THE SATELLITE MODEL [emphasis in original], a derivative of the garden city, was originally proposed in the Toronto Metropolitan master plan of 1943. The plan called for the creation of a definitive greenbelt around the historic city and populating the periphery with self-contained "complete communities", physically separated by green space." These aging high-rises have continued to decline due to a culmination of issues related to state disinvestment, spatial alienation, poor transit access, and socio-spatial stigmatization. The vestiges of modernist planning have left these tower communities disconnected from the fabric of the city.

5.0 Case Study: Tower Renewal

Context

The lack of housing opened the path to new planning and architecture ventures. The modernist strategy concentrated on the creation of high-rise buildings surrounded by green parks. High-rise housing became very popular among the middle-class population, couples, and empty

nesters; therefore, making it possible for the creation of a safe environment and shelter for a significant proportion of the population. In the past, these buildings were important to house middle-income families, who in most cases had a car. Today, these dwellings house low-income residents, new immigrants, and seniors. Therefore, these towers provide a significant proportion of the City of Toronto's affordable housing stock.

The "tower in the park" approach has been critiqued as a design approach that has fostered social isolation and segregation. This modernist vision is often seen as a "colonial model of isolated units", which Kipfer & Petrunia (2009) illustrate as, "exemplified best by functionally disaggregated high-rise clusters, bungalow districts, and business parks" (p. 113). One of the major critiques of modernism is that it is imposed on the natural landscapes of countries and their societies, thus violently destroying the urban and cultural fabrics of the past.

In the Toronto context, the urban is represented by skyscrapers (office buildings and condos) in the downtown core under neoliberal conditions. At the same time, suburbia (for the most part) has become more intensified and diversified than the post-WWII form of single-family houses and picket fences. However, the high-rise buildings of the post-WWII era have become the affordable housing of today. These dwellings are home to contemporary Toronto, a multicultural society. Toronto's high-rise stock is impressive. According to the Tower Renewal Office, "Toronto has approximately 1200 older high-rise apartment buildings, constructed of concrete between 1945 and 1984" (Tower Renewal, 2013). Whereas in most cities, the high-rise dwellings are more present in the downtown core, these buildings are spread across the 140 neighbourhoods of Toronto. These old apartment buildings make up 25% of Toronto's housing. "Now between 30 and 60 years old, these towers stand as largescale representations of the devalorization of the inner suburbs: drab, unfashionable and in need of renewal" (Poppe & Young, 2015, p. 616). In fact,

renewal is what the City of Toronto is aiming for. Instead of the modernist approach, where the building was torn down to make space for a new, more modern one, the municipality of Toronto has chosen an environmentally friendly approach, through retrofitting and infilling. Demolishing these high-rises is not an option.

The Tower Renewal program was initiated in the City of Toronto in 2008 as part of the Toronto Strong Neighbourhood Strategy 2020. The program focuses on the improvement and rehabilitation of post-WWII modernist apartment buildings. Considering the large stock of this type of housing in Toronto, this project is a large-scale one and is motivated by postmodernist thinking. The improvement of housing can alleviate current challenges that the communities are experiencing; therefore, the aim is to foster healthier living conditions and a stronger sense of community.

Implementation

The Tower Renewal Unit project has implemented a series of programs and toolkits to achieve its goal. The Sustainable Towers, Engaging People (STEPS) program aims to evaluate buildings from different points of view and make them more sustainable. STEPS looks closely at the buildings, taking into consideration waste management, energy, water, heating, and cooling systems. This is due to the fact that energy and waste management processes are not up to date in these buildings. Apartment towers are among the highest energy users of all housing types in the region, requiring as much as 25% more energy per square metre compared to a single-detached house (Stewart, 2008). Similarly, they typically have low waste diversion rates of less than 12% (Ministry of Infrastructure, 2010).

The goal of STEPS is to lower maintenance costs and use the revenue generated to benefit the tenants. Moreover, property owners and building managers benefit from STEPS, by improving

their buildings, which can be later translated into higher occupancy rates. Overall, the community benefits from these improvements, where the inhabitants have the possibility to have spaces to engage with one another and participate in the building of stronger communities.

The Tower Renewal Unit has created several programs to make possible the participation, engagement, and education of the tower residents. For example, the Green Champion program aims to educate the residents of Thorncliffe Park. Interested residents are offered workshops and community engagement opportunities to be part of the change that is involving their neighbourhood. Another program initiated by the Tower Renewal program is Recipe for Community, which focuses on community engagement for a sustainable neighbourhood that works towards sustainability, food security and beautification. This program has its base in Parkdale, which has been identified as one of the thirty-one Neighbourhood Improvement Areas (NIA) in Toronto.

The strict zoning that characterized the Radiant City is a limitation of the modernist planning legacy. As these towers were meant for households that had access to private vehicles, new residents who do not have car ownership can be isolated by limited transportation to essential services, such as grocery stores and health providers. In order to decrease inaccessibility in the tower communities, the residential apartment commercial (RAC) Zoning was implemented. By amending by-law No. 572-2014, the residents of 500 apartment towers acquired the ability to rethink and decide the social and economic character of their neighbourhood. The replacement of strict residential zoning by-laws came because of the partnership of different and multi-sector partnerships, such as United Way Toronto, Toronto Public Health, the City of Toronto, ERA Architects and the Centre for Urban Growth + Renewal. RAC has allowed for the inclusion of

small-scale businesses and community amenities, from pop-up markets and urban agriculture to health services, grocery stores, office space and libraries.

The towers in Toronto's inner suburbs will need more than herb gardens and art murals if the affordable housing stock is to last another 50 years, Stewart of ERA Architects admits. But with the new zoning changes, tower-owners will be allowed to act less like simple rent cheque-collectors and more as community developers, intent on increasing the value of their real-estate assets by adding social value to their communities. At least, that's the theory. (Coyne, 2014)

Another program initiated by Tower Renewal is the High-Rise Retrofit Improvement Support Program (Hi-RIS), where the property owner can apply to be part of the program to receive financial help to upgrade the tower in terms of energy efficiency. "The Program is designed to facilitate the installation of qualifying energy efficiency, water conservation, and renewable energy technology retrofits at residential rental buildings, as well as related energy audits by providing financing. Repayment will be secured by imposing a local improvement charge on the private residential rental apartment, as authorized by Ontario Regulation 596/06, as amended" (City of Toronto, 2021a).

To further support the Tower Renewal program, the Taking Action on Tower Renewal Program was created to provide more grants and financing to eligible property owners to advance retrofitting in Toronto's multi-residential housing stock. Taking Action on Tower Renewal advances many City priorities including addressing climate change, improving rental housing quality, and maintaining the affordable rental housing stock. The Program will be part of the actions that respond to the City's declaration of a climate emergency and TransformTO. Through this program, the city is directly enabling the long-term investment required to maintain this crucial building stock and will help implement key actions in the HousingTO Action Plan 2020-2030 and the Poverty Reduction Strategy" (City of Toronto, 2021b, p.1)

The Poverty Reduction Strategy is a 20-year plan that aims to better housing stability, access to services and wide transportation options, quality of jobs, and an overall systemic change. The Poverty Reduction Strategy was adopted by the City Council on November 26, 2019, and has invested in and maintained different initiatives. According to the City of Toronto website, it has contributed to student nutrition programs, employment programs, shelters, childcare fee subsidies, libraries, and TTC services. In connection with Tower Renewal, it has also initiated initiatives regarding affordable rental homes. In its vision statement, the City of Toronto claims that “By 2035, Toronto is a city with opportunities for all: a leader in the collective pursuit of justice, fairness, and equity. We want to be renowned as a city where everyone has access to good jobs, adequate income, stable housing, affordable transportation, nutritious food, and supportive services”.

Limitations

However, some factors can limit the implementation of Tower Renewal. The most significant factor is that tower ownership is divided between various developers. Even though the city has created incentive programs such as the Hi-RIS, to create a certain level of homogeneity regarding renewal and retrofitting, all the tower communities have to adhere to the initiative, which is an arduous task. Also, planning zoning policies will have to change for all the scattered suburban tower locations throughout the GTA, meaning the cooperation of all municipalities. This task becomes even more difficult if conceptualizing Tower Renewal on a regional scale. Moreover, we are limited in understanding how to implement these changes in the long term and ensure that the property owners will maintain the buildings so that problems of building decay are avoided. Finally, affordability needs to be ensured if these properties are to become the complete communities they are envisioned to be. This “may include agreements with owners for rent freezes

in exchange for density bonusing and renewal financing, as well as facilitating a partnership with affordable and public housing providers.” (ERA Architects et al., 2010, p.vii)

As with the case of Tower Renewal, place-based policies and initiatives target areas or neighbourhoods that are having economic and/or social difficulties. Place-based policies have four focal elements integrated into the framework: it considers local knowledge, it combines social and economic policies, and it emphasizes collaborating with and recognizing local government (Bradford, 2005, p.ii). On one hand, place-based urban policies are moulded in a way that reflects the local experience and collaborative practices between stakeholders. On the other hand, place-based urban policies that are concentrated in low-income, non-white neighbourhoods tend “to constitute a liberal “post-colonial” poor, one who is eminently less threatening to the political stability of imperialist capitalism.” (Zafarghandi, 2017, p.ii) Moreover, place-based policies like Tower Renewal are limited in what can be achieved in terms of longevity.

6.0 Discussion

In this section, the paper will try to envision how Garden City ideas can help envision a more regional focus of the Tower Renewal program. Tower Renewal is a place-based program led by the government, which pushes for retrofitting and environmental renewal of post-war towers in Toronto. Garden City had several important elements that would create a favourable environment for a balanced city, such as employment opportunities, cultural activities, essential services, and nature (D. Young & Keil, 2014). These ideas have been adapted to the 21st-century city and continue to guide urban planning today. The Tower Renewal program does not meet the proposed criteria set in the methodology section; therefore, this paper suggests the 15-minute city approach,

which addresses some of the criteria such as connecting place-based policy to a broader regional vision.

Up until the introduction of cars as the dominant transportation mode, cities were built around human interaction and developed around human needs. Yet, with the introduction of the automobile, cities not only adapted to the car, but cities developed a heavy reliance on the automobile. Also, rigid zoning structures pushed for residential areas to be segregated and isolated and only accessible through car uses. Our car-dependent planning has exacerbated social and economic inequalities.

The 15-minute city - the Modern Garden City?

The Garden City principles have been discussed and evaluated by scholars and professionals. In fact, Clarence Perry, an American urban planner proposed in the 1920s, the “neighbourhood unit” with the aim to “clarify the interior form and social structure of garden cities” (Wells & Donofrio, 2011, p. 568). The ‘neighbourhood unit’ was also implemented successfully in Radburn, as was explained previously in this paper. The 15-minute city can be seen as an evolution of Perry’s “neighbourhood unit” where “each neighbourhood should provide the fundamental services and main functions for working, supplying, caring, learning, and leisure within a 15-minute slow mobility distance (walking, cycling, etc)” (Pinto & Akhavan, 2022, p.371).

The 15-minute city approach became even more popular during the height of the COVID-19 pandemic where the need for more walkable streets, open spaces, and close-by essential services was more visible, especially to households that do not own a car. “Beyond appearances, the aim of the project is not to rebuild a "village" in the city with some roads closed to traffic, but to reduce as much as possible one of the most dangerous habits of our "normality": total dependence on the

use of mechanized means of transport for any human activity” (Pinto & Akhavan, 2022, p. 367-377).

The 15-minute city approach was claimed by Professor Carlos Moreno, who in a TedTalk on the 15-minute city, argues that we must rethink cities around four guiding principles, which he considers the building blocks of the 15-minute city. According to Moreno (2021), the first building block is ecology, to build cities that integrate with nature and our surroundings. The second is proximity to special services and activities. Third comes solidarity, so to create links and interaction between people. The final building block for Moreno is public engagement, which should involve citizens in the transformation of their neighbourhood.

Also, crucial to Moreno’s 15-minute city is the idea of Chrono-topia (Kucharek, 2021). “The origins of chrono-urbanism can be found in the work of Torsten Hägerstrand and his “geography of time” that emerged in the late 1960s, where he highlights the importance of the finiteness of space-time and its limiting effects on human interaction with territories” (Ferrer-Ortiz et al., 2022, p.147). “This term more broadly describes the city planning concept as a rethinking of time in relation to mobility to maintain the current quality of living more sustainably. It proposes to do this by moving towards a more polycentric, diverse use city with the four components of proximity, diversity, density, and ubiquity to offer high living quality within short distances and minimize auto dependence” (Gower & Grodach, 2022, p.38.). These concepts orbit around the 15-minute city and help us to reimagine the urban spaces without the constraints of time and envision flexible multiple uses for a place.

We have yet to see the potential of the 15-minute city vision materialize; however, cities around the world have started to consider and even implement different components of the 15-minute concept. Paris was the first city to adjust city planning to the 15-minute city model, through

the commitment of the city Mayor Anne Hidalgo, who made the 15-minute city the centrepiece of her successful re-election campaign. In fact, according to (Cullen, 2021), since the re-election, Paris has increased the number of cycling lanes; 60 of the makeshift cycling paths that were installed during the pandemic have become permanent. Also, the car parking spots, and speed limits have decreased, while the number of charging points for electric vehicles has increased. Moreover, Paris has implemented an initiative of chrono-urbanism where 10 schoolyards are made available to the general public as “oasis yards’ after school hours.

The 15-minute model shows how to make our neighbourhoods more sustainable by cutting down on the use of cars; therefore, decreasing pollution. Moreno’s 15-minute city also promotes digitalization such as the ‘living city’ concept, which he argues would aid to optimize the urban fabric, as explained by Allam et al.(2022, p.182):

Digitalisation makes it possible for progress to be made in the other three dimensions, especially via data gathering through the Internet of Things networks, resulting in better informed decisions along with the potential to automate different urban processes, producing more opportunities to achieve sustainability outcomes coupled with increased urban efficiency.

The ‘living city’ takes a different path from the very techno-based ‘Smart City’ model. The living city as envisioned by Moreno puts humans in the forefront, not the big-data companies as Moreno explains in an interview for PCA-Stream (2017). “I quickly understood that technocentrism would mean the death of the city in the sense that it erases the place of the living and the social interactions that are woven within it.”

Just as Jane Jacobs, Moreno describes the living city as an organism which he explains:

It is not enough to breathe to consider oneself alive. This is simply a metabolic ability, as essential as it may be. In the same way, it is not enough to be able to breathe in a city, to avail of clean energy or low energy buildings, nor even to enjoy a pollution-free environment. Human beings really come alive when they come into contact with society and acquire a capacity for creation and possibilities for co-construction and co-creation. Exchanging ideas constitutes the basis for the emergence of the living as a being, identified

by a biological metabolism but also by the appearance of creative thinking, bringing new creations in its wake. This is the basis of evolution. (PCA-Stream, 2017, The technocentrism is the death of the city section, para. 2)

In short, the living city pushes for the creation of relationships and exchange of ideas between the human actors while creating an environment “in which citizens and governance can exchange in a transversal manner, where the way in which things are built is no longer dictated by the verticality of technology or of architecture” (PCA-Stream, 2017, The every city is a creative ecosystem section, para. 1).

Also, Moreno argues that through the living city approach, we will have the possibility to rethink governance with technology. For example, Paris has launched a new application ‘DansMaRue’ where citizens can signal urban issues in the city such as damaged equipment or potholes. They can also share feedback regarding urban amenities or ideas on how to improve the city or their neighbourhood. Moreover, Moreno explains:

Technology only makes sense if there is a good governance at city level, to frame it and to channel it... The metropolitan scale is a very good scale to build this new governance, linking up transport, urban, housing and economic systems. But they have also understood the need to include a better dialog with citizens in the process, at a very local neighborhood scale. At a time when there is a growing mistrust of the State level, mayors are taking ownership of urban issues, with a participatory approach. (Brain, 2019, para. 2)

In short, the 15-minute city aims to create cities that target climate change through the decrease of car use by creating cities that have proximity as a goal. By creating neighbourhoods where all basic needs can be satisfied within a 15-minute range by walking or biking, it pushes for less car depending spaces that encourage vibrant and connected neighbourhoods. By integrating the 15-minute city with the living city, there is a potential to make the residents part of the building process through active public participation. “Pertaining to safety, sustainability, resilience and inclusivity, the use of diverse technologies, smart devices and sensors can lead to this actualization and in effect render a higher quality of life” (Moreno et al., p. 98, 2021).

Criticism

The 15-minute model has been criticized as a path to gentrification as it would restore spaces and facilitate gentrification. “Research has repeatedly found that access to green space is a positive driver of residential property values and strengthens the identity of an area as attractive and desirable to work, live, and visit” (DeSandoli, p.21, 2021). The renewal of spaces could cause the slippery slope of gentrification; however, this can be avoided through good governance by city planners and policies that implement limitations to rent prices and the creation of more affordable housing.

When asked about the possibility of gentrification, Moreno responded that a 15- minute poly-centric city would work for most of the citizens (Liberto, 2022). Moreno also adds that “Gentrification is a common enemy because it’s a way for private interests to be obstructive in parts of the city where you need to be enacting social circularity” (Kucharek, 2021, p.65). However, Moreno clarifies that participation is an important component of the 15-minute model; therefore, Paris has the largest participatory budget in the world, with €800 million dedicated to projects that would improve neighbourhoods. (Petrusnini, 2021) Finally, the 15-minute city proposed by Moreno does not clarify how this model can be translated to a regional level. At a time of increased urbanization, a regional vision is important to take into consideration future requirements and demands for more balanced growth. It is important to highlight the limitations of the 15-minute city if it is not contextualized socially and regionally. Howard’s vision of ‘Social Cities’ can provide a solution to this issue.

15-minute City in Toronto

In the North American context, there are other potential considerations when implementing the 15-minute city. North American cities are structurally very different from the European Cities

where the Garden City and 15-minute city experimentation took off. Whereas European cities are mostly compact, as their urban landscape was mostly complete before the advent of the automobile. Yet, North American cities have sprawled far from the city centre where most essential services and public transport are available.

Suburban sprawl makes it hard to implement the 15-minute city approach in the inner suburbs or suburbs of the city. A copy-paste approach to the 15-minute city in the North American city structure without considering the different demographic and social frameworks could have a negative impact as North American cities have a history of segregation enacted by discriminatory policies and bylaws towards racial minorities. In this context, it is essential to have a meaningful engagement with the neighbourhood in designing their neighbourhoods.

A bottom-up approach to creating the 15-minute neighbourhood, an approach that is not copy-paste, but flexible and adaptable as Howard had intended. When speaking about engagement, Jay Pitter, an award-winning placemaker and urban planning lecturer suggests the idea of “co-creators” when designing the 15-minute city. In an interview with Lee (2021) Pitter clarifies:

Co-creation requires following the lead of the community respecting the fact that as urbanists we have a toolkit of technical expertise which is indeed important, but the community has lived experiences. They have the feeling of the place, they know the intangible history of the place meaning the daily routes and rituals and tragedy and celebrations and until you get on the ground with the residents literally walk in their parks and sidewalks, taking the bus and the subway you absolutely have no right to have an idea about what their neighbourhood should look like.

In short, a 15-minute city model that could work in North American cities is one that is co-created by residents and planners on a hyper-local level. Given the sprawl that has happened, a 15-minute neighbourhood model is not only feasible given the current urban structure but needed.

15 Minute Tower Neighbourhoods

With the implementation of RAC in tower communities, there is a possibility to push for compact neighbourhoods where transportation, amenities, and placemaking are key. By implementing a 15-minute neighbourhood model in the Neighbourhood Improvement Areas of Toronto (NIA) there is a possibility to co-create spaces that reflect the neighbourhood's interests and needs. However, a top-down approach should be avoided. Instead of just copy-pasting the model from a Eurocentric vision, residents and planners should use the messages of the 15-minute city as guiding points. By keeping in mind the building blocks of the 15-minute city, such as ecology, proximity, solidarity, and engagement, we can give our inner city neighbourhoods a chance to become places where residents can thrive in vibrant neighbourhoods that are made for them and not for cars. Current social networks in tower communities should be nurtured and utilized to contribute creative strategies in implementing a 15-minute vision that addresses racial and gendered inequities.

Through the process of co-creation, residents and planners can work together using the planner's technical knowledge and the residents' lived experience from a hyper-local standpoint to create neighbourhoods that are inclusive, ecological, interconnected, visually pleasing to walk or bike, and with amenities requested by citizens. An example of the potential of co-creation is East Scarborough Storefront. Through the work of the community local youth, mentored by architects, planners, and designers from Sustainable.TO and E.R.A. Architects - conceived and co-led by archiTEXT, the East Scarborough's Community Design Initiative (CDI) was created.

East Scarborough is home to 5 NIAs, and one of them is Kingston-Galloway-Orton Park (KGO). CDI started as a collaboration with KGO youth, where they have developed a Master Plan to transform a former police station into a community facility. “But the goals of the project were broader than co-creating a community space - they sought to leverage design as a mechanism for inspiring participatory, cross-sectoral investment in social, economic, cultural, environmental, and civic neighbourhood well-being for years to come” (Bhatia, 2020, p.5). After this success, the KGO was designated as a Tower Neighbourhood Renewal site by the municipal government. “In 2018, the East Scarborough Storefront launched C3 to continue coordinating grassroots groups, community-based organizations, funders, developers, employers, and governments at all levels in implementing holistic strategies for fostering community connections and inspiring neighbourhood improvements” (Bhatia, 2020, p.6).

The Community Design Initiative is an example of what can be achieved when local knowledge drives the creation of neighbourhoods. A 15-minute neighbourhood vision encompassed in the Tower Renewal programming could alleviate social and economic issues that cannot be addressed by retrofitting a tower and adding one grocery store. The inner suburbs of Toronto are home to people of different skill sets and rich cultural diversity that is reflected in the neighbourhood landscape. These people could create a vibrant and inclusive area where residents feel they belong.

However, there is a risk in creating 15-minute tower neighbourhoods that are segregated from the rest of the city. Such an event would reproduce cases of “ghettoization” of neighbourhoods that often are already stigmatized. Inner-city suburbs in Toronto are not well connected via public transportation. It is important to create proximity yet being able to go to one

grocery store over another should be a choice, not an imposition. While proximity is needed, a resident should not be limited.

A functional and efficient public transportation system that interconnects 15-minute neighbourhoods is essential in creating an urban culture and knowledge transmission among citizens. The idea of interconnectivity was also pushed by Howard in the creation of the “Social City”, where all garden cities were connected through railroads. In Toronto’s harsh winter, it is understandable that residents can be reluctant to bike. A possible solution can be the increase of electric streetcars as a transportation option. Interestingly, even though Howard lived at a time when electric modes of transportation seemed utopian, his vision pushed for electricity to reduce pollution as he explains “The smoke fiend is kept well within bounds in Garden City; for all machinery is driven by electric energy, with the result that the cost of electricity for lighting and other purposes is greatly reduced” (Howard, 1902, p. 21).

Finally, one of the most important features of the Garden City and the 15-minute city vision is the ability to access employment. “New ways of working should focus on the combination of remote-working and coworking schemes as well as analyzing the practices of relocation of workplaces and co-location of organizations in the 15-minute neighbourhood” (Di Marino et al., 2022, p.5). Important here is the notion of decentralized work. The long commutes to work are not only time-consuming but also increase pollution. Moreover, the Toronto inner suburbs are not efficiently served by public transportation, which limits working options. The pandemic shifted the rigid work locations and pushed for digital working or hybrid workstyles, which can present new opportunities to overcome transit inequities in the city.

However, critiques on the quality of remote working conditions suggest that brainstorming and knowledge sharing are enhanced in environments where people come together; “in the

neighborhood context, this could be manifested as new office space added locally, creating co-working hubs or repurposing existing office space serving the needs of local community” (Pozoukidou & Chatziyiannaki, 2021, p. 4.). Cities like Portland and Austin have seen an increase of workspaces in suburban locations being set up by firms to make the 15-minute city framework possible. With more jobs and workspaces in the inner city, and the flexibility to work from home, there is a possibility of making 15- minute neighbourhoods in the Toronto inner suburbs a reality.

7.0 Conclusion

This paper has explored how urban landscapes have changed throughout time as a reflection of social, economic, and political change. Often, in trying to escape and solve city problems, urban thinkers have designed their utopian version of the urban. The Howardian Garden City was conceived as a response to the overcrowded and polluted urban conditions of 19th-century London. The Garden City championed ideas of sustainability, polycentric cities, robust public transportation, and walkable neighbourhood units. Yet, through the advent of the automobile, cities sprawled excessively, and suburbia was magnified. Utopian visions of car-dependent cities were encouraged by urban thinkers such as Le Corbusier and Frank Lloyd Wright, and these ideas have heavily influenced city planning from 1930 to today. Le Corbusier's modernist vision of the ‘tower in the park’ produced negative consequences as it promised that the built form would create a more equitable society. Howard's "Social City" model encompassed an alternative to the capitalist city.

I believe some key ideals in Howard’s Garden City model are re-emerging in planning discussions and rationale justifications of the 15-minute city. This paper concludes with a bold proposal for a 15-minute tower neighbourhood vision to aid the social disparities created in the

decaying and isolated “towers in the park.” This paper maintains that the implementation of key ideals of the 15-minute city model in tower communities could promote complete neighbourhoods that are sustainable, inclusive and with job-housing balance. Interweaving Howard’s regional vision with the 15-minute city can be productive in envisioning regional restructuring at the hyper-local level in order to achieve sustainable and inclusive tower neighbourhoods.

However, it is imperative to note that with any regional planning vision, place matters. Existing social infrastructure and networks need to be harnessed for site-specific programs and policy measures to produce meaningful and beneficial changes in people’s lives. Utopias should be dreamed of collectively, reflecting different urban realities. There is an essential need to shift the city planning paradigm into one that is people-oriented and not car-dependent.

Planners and experts cannot prescribe an urban vision and different realities as urbanity is a complex realm. Therefore, a 15-minute spatial strategy for tower neighbourhoods might improve tower communities, but it is imperative for it to be couched within a broader regional plan and state funding from all three levels of government. While matters such as affordable housing, transportation and jobs are planning issues, these are policy areas that require state funding and supports. The state must support these progressive ideas with the creation of economic policies for job balance outside the downtown core. Also, the state will have to heavily invest and support affordable housing and transportation in order to limit the marketization of the 15-minute tower neighbourhoods. To have a 15-minute city approach on a regional level based on the ‘Social City’ model, municipalities must collaborate in creating an efficient, environmentally friendly, and affordable transportation system that connects tower neighbourhoods with different locals within the city and region. Such a transportation system would not only lower pollution but also create opportunities for more employment options and lessen commute times.

Policies that would impede the possible gentrification and marketization of 15-minute neighbourhoods should focus on building affordable housing, and retrofitting programs such as Tower Renewal will have to expand their budgets and not be limited to towers in the park, but also other forms of housing for low and medium income households. More policies must take place to prohibit luxury developments that push for gentrification and higher land values. Developers must be accountable for how the neighbourhood will change due to their projects, and bylaws that enforce developers to invest in public amenities and infrastructure should be encouraged and enforced, especially in terms of luxury and large-scale development projects. Strong hyper-local co-creation community engagement practices have to be the starting point for any improvement or investment in the 15-minute tower neighbourhood so as to not fall into the slippery slope of expert-driven planning.

References:

- Allam, Z., Nieuwenhuijsen, M., Chabaud, D., & Moreno, C. (2022). The 15-minute city offers a new framework for sustainability, liveability, and health. *The Lancet Planetary Health*, 6, E181–E183. [https://doi.org/10.1016/S2542-5196\(22\)00014-6](https://doi.org/10.1016/S2542-5196(22)00014-6)
- Alofsin, A. (2011). Broadacre City—Ideal and Nemesis. *American Art*, 25(2), 21–25. <https://doi.org/10.1086/661965>
- Beevers, R. (1988). The Young Ebenezer. In R. Beevers (Ed.), *The Garden City Utopia: A Critical Biography of Ebenezer Howard* (pp. 1–8). Palgrave Macmillan UK. https://doi.org/10.1007/978-1-349-19033-1_1
- Bhatia, A. (2020). How a community-led design initiative in Toronto is redefining neighborhood revitalization from the bottom-up. In *The Avenue [BLOG]*. The Brookings Institution. <https://search.proquest.com/docview/2444177873?pq-origsite=primo>
- Bradford, N. J. (2005). *Place-based public policy towards a new urban and community agenda for Canada*. Canadian Policy Research Networks, Work Network.
- Brain, S. (2019, March 6). Meeting With Carlos Moreno: Human Smart Cities. *Carlos Moreno*. <https://www.moreno-web.net/meeting-with-carlos-moreno-human-smart-cities/>
- Britain-Catlin, T. (2004). Le Corbusier and the concept of self: Corbusian societies. *The Architectural Review*, 215(1284), 96–97.
- Caulfield, J. (1994). *City form and everyday life Toronto's gentrification and critical social practice*. University of Toronto Press.
- City of Toronto. (2021a). *Creating "Taking Action on Tower Renewal" as a New Stream of Toronto's Residential Energy Retrofit Programs*. <https://www.toronto.ca/legdocs/mmis/2021/ie/bgrd/backgroundfile-168372.pdf>

- City of Toronto. (2021b). *Creating “Taking Action on Tower Renewal” as a New Stream of Toronto’s Residential Energy Retrofit Programs*. 17.
- Clark, B. (2003). Ebenezer Howard And the Marriage of Town and Country: An Introduction to Howard’s “Garden Cities of To-morrow” (Selections). *Organization & Environment*, 16(1), 87–97.
- Clevenger, S. M., & Andrews, D. L. (2017). ‘A Peaceful Path to’ Healthy Bodies: The Biopolitics of Ebenezer Howard’s Garden City. *Urban Planning*, 2(4), 141–145.
<https://doi.org/10.17645/up.v2i4.1251>
- Coyne, T. (2014, October 26). United Way, Tower Renewal program: Overcoming the challenges of tower-block neighbourhoods. *The Toronto Star*.
https://www.thestar.com/news/gta/unitedway/2014/10/26/united_way_tower_renewal_program_overcoming_the_challenges_of_towerblock_neighbourhoods.html
- Cullen, R. (2021, November 8). The plan to transform Paris into a “15-minute city.” *CGTN*.
<https://newseu.cgtn.com/news/2021-11-08/The-plan-to-transform-Paris-into-a-15-minute-city150iEWb5Hu8/index.html#:~:text=How%20will%20it%20work%3F,bike%20ride%20from%20their%20home.>
- Curl, J. S., & Wilson, S. (2015). *The Oxford Dictionary of Architecture*. University Press, Incorporated.
- DeSandoli, E. (2021). *Complete Streets in the 15 Minute City*. The Centre for Active Transportation. <https://www.completestreetsforcanada.ca/wp-content/uploads/2021/02/Complete-Streets-and-the-15-Minute-City.pdf>

- Di Marino, M., Tomaz, E., Henriques, C., & Chavoshi, S. H. (2022). The 15-minute city concept and new working spaces: A planning perspective from Oslo and Lisbon. *European Planning Studies, ahead-of-print*(ahead-of-print), 1–23.
<https://doi.org/10.1080/09654313.2022.2082837>
- Dummett, E. (2008). *Green space and cosmic order: Le Corbusier's understanding of nature* [ProQuest Dissertations Publishing].
<https://search.proquest.com/docview/1774213426?pq-origsite=primo>
- Dunnett, J. (2000). Le Corbusier and the city without streets. In *Modern City Revisited*. Taylor & Francis.
- Ellis, C. (2005). Lewis Mumford and Norman Bel Geddes: The highway, the city and the future. *Planning Perspectives*, 20(1), 51–68. <https://doi.org/10.1080/0266543042000300537>
- ERA Architects, Canadian Electronic Library, Ontario Ministry of Infrastructure, Planning Alliance Inc, & University of Toronto. (2010). *Tower neighbourhood renewal in the Greater Golden Horseshoe: An analysis of high-rise apartment tower neighbourhoods developed in the post-war boom (1945-1984)*. Canadian Electronic Library.
- Ferrer-Ortiz, C., Marquet, O., Mojica, L., & Vich, G. (2022). Barcelona under the 15-Minute City Lens: Mapping the Accessibility and Proximity Potential Based on Pedestrian Travel Times. *Smart Cities*, 5(1), 146–161. <https://doi.org/10.3390/smartcities5010010>
- Filion, P. (1999). Rupture or Continuity? Modern and Postmodern Planning in Toronto. *International Journal of Urban and Regional Research*, 23(3), 421–444.
<https://doi.org/10.1111/1468-2427.00206>
- Fishman, R. (1997). *Urban Utopias in the Twentieth Century: Ebenezer Howard, Frank Lloyd Wright, and Le Corbusier* (6. print). The MIT Press.

- Gower, A., & Grodach, C. (2022). Planning Innovation or City Branding? Exploring How Cities Operationalise the 20-Minute Neighbourhood Concept. *Urban Policy and Research*, 40(1), 36–52. <https://doi.org/10.1080/08111146.2021.2019701>
- Grabow, S. (1977). Frank Lloyd Wright and the American City: The Broadacres Debate. *Journal of the American Institute of Planners*, 43(2), 115–124. <https://doi.org/10.1080/01944367708977768>
- Hall, P. (2011). *Urban and regional planning* (5th ed.). Routledge.
- Hall, P. (2014). *Cities of tomorrow: An intellectual history of urban planning and design since 1880* (Fourth edition). Wiley-Blackwell.
- Hardy, D. (1991). *From Garden Cities to New Towns: Campaigning for Town and Country Planning 1899-1946*. Routledge. <https://doi.org/10.4324/9780203451267>
- Hardy, D. (2000). *Utopian England: Community Experiments 1900-1945*. Routledge. <https://doi.org/10.4324/9780203856994>
- Harvey, D. (1996). *Justice, nature, and the geography of difference*. Blackwell Publishers.
- Henderson, K., Lock, K., & Ellis, H. (2019). *The Art of Building a Garden City: Designing New Communities for the 21st Century*. RIBA Publishing. <https://doi.org/10.4324/9780429346491>
- Hooson, D. J. M. (1958). The Recent Growth of Population and Industry in Hertfordshire. *Transactions and Papers (Institute of British Geographers)*, 25, 197–208. <https://doi.org/10.2307/621187>
- Howard, E. (1902). *Garden cities of to-morrow: (Being the third edition of "To-morrow: a peaceful path to real reform")*. S. Sonnenschein & co., ltd.

- Howard, E., Hall, P., Hardy, D., & Ward, C. (1898). *To-morrow: A peaceful path to real reform* (Original ed). Routledge.
- Howard, E., & Osborn, F. J. (2006). *Garden Cities of To-Morrow*. Routledge.
<https://doi.org/10.4324/9780203716779>
- Jo, S., & Choi, I. (2003). Human Figure in Le Corbusier's Ideas for Cities. *Journal of Asian Architecture and Building Engineering*, 2(2), b137–b144.
<https://doi.org/10.3130/jaabe.2.b137>
- Kipfer, S., & Petrunia, J. (2009). “recolonization” and public housing: A Toronto case study. *Studies in Political Economy*, 83(1), 111–139.
<https://doi.org/10.1080/19187033.2009.11675058>
- Kucharek, J.-C. (2021). 15 minutes to save the world: Carlos Moreno has combined an active social conscience and scientific expertise to create the 15-minute city for the good of people and the planet. *RIBA Journal* (1993), 128(12), 62–65.
- Le Corbusier. (1952). *Towards a new architecture*. The Architectural Press.
- Le Corbusier. (1967). *The radiant city: Elements of a doctrine of urbanism to be used as the basis of our machine-age civilization*. Orion Press.
- Le Corbusier, 1887-1965. (1998). *Essential Le Corbusier: L'esprit nouveau articles /*. Architectural Press.
- Lee, A. (2021, September 28). Should all Canadian cities be 15-minute cities? *The Globe and Mail*. <https://www.theglobeandmail.com/business/article-should-all-canadian-cities-be-15-minute-cities/>
- Letchworth Garden City Heritage Foundation*. (n.d.). Retrieved March 12, 2022, from <https://www.leitchworth.com/>

- Lewis, J. (2015). Preserving and maintaining the concept of Letchworth Garden City. *Planning Perspectives*, 30(1), 153–163. <https://doi.org/10.1080/02665433.2014.971127>
- Liberto, D. (2022, May). *Who Was Elinor Ostrom?* Investopedia.
<https://www.investopedia.com/terms/e/elinor-ostrom.asp>
- Lickwar, P., & Thoren, R. (2020). Welwyn Garden City: Hertfordshire, England. In *Farmscape*. Routledge.
- Low. (2013). Eco-Cities in Japan: Past and Future. *The Journal of Urban Technology*, 20(1), 7–22. <https://doi.org/10.1080/10630732.2012.735107>
- Maffei, N. P. (2012). “I Have Seen the Future”: Norman Bel Geddes’ “Futurama” as Immersive Design. *Design and Culture*, 4(1), 79–82.
<https://doi.org/10.2752/175470812X13176523285264>
- Michiel Dehaene. (2002). Broadacre city: the city in the eye of the beholder. *Journal of Architectural and Planning Research*, 19(2), 91–109.
- Miles, M. (2007). *Urban Utopias: The Built and Social Architectures of Alternative Settlements*. Routledge. <https://doi.org/10.4324/9780203099124>
- Montavon, M.; Steemers, K.; Cheng, V.; Compagnon, R. La Ville Radieuse by Le Corbusier, once again a case study. In Proceedings of the PLEA2006—The 23rd Conference on Passive and Low Energy Architecture, Geneva, Switzerland, 6–8 September 2006; pp. 701–706.
- More, T. (2014). *Utopia* (Second edition.). Yale University Press.
- Moreno C. (Director). (2021, January 25). *The 15-minute city | Carlos Moreno* [Video]. TedTalk. <https://www.youtube.com/watch?v=TQ2f4sJVXAI>

- Moreno, C., Allam, Z., Chabaud, D., Gall, C., & Pratlong, F. (2021). Introducing the “15-Minute City”: Sustainability, Resilience and Place Identity in Future Post-Pandemic Cities. *Smart Cities*, 4(1), 93–111. <https://doi.org/10.3390/smartcities4010006>
- Morshed, A. (2004). The Aesthetics of Ascension in Norman Bel Geddes’s Futurama. *Journal of the Society of Architectural Historians*, 63(1), 74–99. <https://doi.org/10.2307/4127993>
- Mumford, L. (1989). *The city in history: Its origins, its transformations, and its prospects*. Harcourt Brace Jovanovich.
- Nomis—Official Labour Market Statistics. (n.d.). Retrieved March 13, 2022, from <https://www.nomisweb.co.uk/>
- OECD. (2020). *Improving Governance with Policy Evaluation: Lessons from Country Experience*. OECD. <https://doi.org/10.1787/89b1577d-en>
- Osborn, F. J. (1950). Sir Ebenezer Howard: The Evolution of His Ideas. *The Town Planning Review*, 21(3), 221–235.
- O’Sullivan, K. (2017). Letchworth. *Berkeley Planning Journal*, 28(1). <https://doi.org/10.5070/BP328133866>
- Owram, D. (2014). *Born at the Right Time: A History of the Baby Boom Generation*. University of Toronto Press.
- Paden, R. (2003). Marxism, Utopianism, and Modern Urban Planning. *Utopian Studies*, 14(1), 82–111.
- PCA-Stream. (2017). *Carlos Moreno—Beyond the Smart City • Articles*. <https://www.pca-stream.com/en/articles/www.pca-stream.com/en/articles/carlos-moreno-beyond-the-smart-city-114>

- Petrusnini, G. (2021, July). *Living differently: How does a 15-minute city work?*
<https://ww3.rics.org/uk/en/modus/built-environment/homes-and-communities/living-differently--how-does-a-15-minute-city-work-.html>
- Pinto, F., & Akhavan, M. (2022). Scenarios for a Post-Pandemic City: Urban planning strategies and challenges of making “Milan 15-minutes city.” *Transportation Research Procedia*, 60, 370–377. <https://doi.org/10.1016/j.trpro.2021.12.048>
- Poppe, W., & Young, D. (2015). The Politics of Place: Place-making versus Densification in Toronto’s Tower Neighbourhoods. *International Journal of Urban and Regional Research*, 39(3), 613–621. <https://doi.org/10.1111/1468-2427.12196>
- Pozoukidou, G., & Chatziyiannaki, Z. (2021). 15-Minute City: Decomposing the New Urban Planning Eutopia. *Sustainability (Basel, Switzerland)*, 13(2), 928-.
<https://doi.org/10.3390/su13020928>
- Ravetz, A. (2001). *Council Housing and Culture: The History of a Social Experiment*. Routledge. <https://doi.org/10.4324/9780203451601>
- Richards, S. (2007). The Antisocial Urbanism of Le Corbusier. *Common Knowledge (New York, N.Y.)*, 13(1), 50–66. <https://doi.org/10.1215/0961754X-2006-029>
- Richardson, B. W. (1876). *Hygeia, a City of Health*. Project Gutenberg.
<http://www.gutenberg.org/ebooks/12036>
- Schapiro M. (2002). Looking Forward to Looking Backward: A Dossier of Writings on Architecture from the 1930s. *Grey Room*, 6(6), 67–109.
<https://doi.org/10.1162/152638102317406506>

- Shelton T. (2011). Automobile Utopias and Traditional Urban Infrastructure: Visions of the Coming Conflict, 1925—1940. *Traditional Dwellings and Settlements Review*, 22(2), 63–76.
- Stewart, G. (2008). *The Suburban Tower and Toronto's Legacy of Modern Housing*. Docomomo 39. <http://towerrenewal.com/wp-content/uploads/2016/10/The-Suburban-Tower-and-Torontos-Legacy-of-Modern-Housing.pdf>
- Taylor, N. (1998). *Urban planning theory since 1945*. SAGE Publications.
- Tower Renewal. (2013). *Tower Renewal Accomplishments 2011-2013*. City of Toronto. <https://www.toronto.ca/legdocs/mmis/2013/cd/bgrd/backgroundfile-61306.pdf>
- Vaetisi, S. (2013). Anti-urban Ideologies and Practices in the Evolution of the American City. *Transylvanian Review*. https://www.academia.edu/12916932/Anti_urban_Ideologies_and_Practices_in_the_Evolution_of_the_American_City
- Walker, N. R. (2016). American Crossroads: General Motors' Midcentury Campaign to Promote Modernist Urban Design in Hometown U.S.A. *Buildings & Landscapes*, 23(2), 89–115. <https://doi.org/10.5749/buildland.23.2.0089>
- Ward, S. (1992). *The Garden City: Past, Present and Future*. Taylor & Francis Group.
- Watson, J. M. (2019). The Suburbanity of Frank Lloyd Wright's Broadacre City. *Journal of Urban History*, 45(5), 1006–1029. <https://doi.org/10.1177/0096144218797923>
- Wells, N. M., & Donofrio, G. A. (2011). Urban Planning, the Natural Environment, and Public Health. In *Encyclopedia of Environmental Health* (Vol. 5, pp. 565–575). Elsevier B.V. <https://doi.org/10.1016/B978-0-444-52272-6.00480-3>
- Wright, F. L. (1932). *The Disappearing City*. New York: Horizon Press.

- Wright, H. M. (1972). Radburn revisited. *Ekistics*, 33(196), 196–201.
- Yoshida, Y., & Koshizawa, A. (2003). The Roles of The Scheme of Management of Letchworth and Welwyn Garden City in Maintaining the Living Environment (Urban Planning). *AIJ Journal of Technology and Design*, 9(18), 297–302. <https://doi.org/10.3130/aijt.9.297>
- Young, D., & Keil, R. (2014). Locating the Urban In-between: Tracking the Urban Politics of Infrastructure in Toronto: The urban politics of infrastructure in Toronto. *International Journal of Urban and Regional Research*, 38(5), 1589–1608.
<https://doi.org/10.1111/1468-2427.12146>
- Young, I. M. (1986). The Ideal of Community and the Politics of Difference. *Social Theory and Practice*, 12(1), 1–26. <https://doi.org/10.5840/soctheorpract198612113>
- Zafarghandi, P.S. (2017). *The “Paris Problem” in Toronto: The State, Space, and the Political Fear of “The Immigrant.”* YorkSpace Institutional Repository.
https://oculyor.primo.exlibrisgroup.com/permalink/01OCUL_YOR/1jocqcq/alma991036274906205164