

Rethinking Urban Hierarchies: A Polycentric Approach for the Toronto Region

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A Major Portfolio submitted to the Faculty of Environmental and Urban Change in partial
fulfillment on the requirements for the degree of Masters in Environmental Studies, York
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July 26th, 2024

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Abstract

This portfolio delves into the transformative processes of urban growth and development in the Toronto region, addressing key challenges such as socio-economic disparities, urban resiliency, and democratic governance. At its core, this portfolio is guided by the principles of polycentrism, a paradigm advocating for multiple, interconnected centres of activity and governance within a comprehensive urban environment. This approach fundamentally challenges the traditional, centralized urban hierarchy, promoting a more equitable distribution of resources and opportunities across various scales – regional, neighbourhood, and service delivery. By adopting a polycentric perspective, this portfolio rethinks and reimagines strategies to tackle the complex urban challenges facing the Toronto region.

The first paper explores polycentrism, advocating for the reorganization of the socio-economic and socio-cultural spheres of the Toronto region into a polycentric structure. This approach fosters a more balanced distribution of growth and enhances economic vitality by rethinking the region's functionality and economic dynamics. Embracing an urban region with multiple centres allows for the decentralization of functions, ensuring a more equitable and democratic urban environment.

The second paper focuses on the 15-Minute City (15mC) concept, which aims to reorganize the micro-scale of urban living. Inspired by Carlos Moreno's vision, this model proposes the creation of self-sufficient neighbourhoods where all essential services and amenities can be accessed within a 15-minute walk or bike ride. By reducing car dependency and promoting densified living, it breaks down the centralized hierarchy of daily life in urban regions, allowing residents to meet their daily needs within a set timeframe.

The final paper examines the proposed (but subsequently rescinded) dissolution of Peel Region and the shift from top-down to bottom-up service delivery models. This case study illustrates the benefits of community-led governance, where services are tailored to the specific needs of diverse communities, such as youth, new immigrants, and the homeless. By collaborating with non-profit networks like Metamorphosis, this approach establishes a service delivery system that is polycentric, accessible, decentralized, and firmly rooted in a stronger democratic framework.

Collectively, these papers argue for a more democratic, socially equal, and sustainable Toronto region. By breaking down centralized hierarchies and embracing polycentricity, this portfolio outlines a visionary pathway for urban development that meets the needs of its diverse population and ensures a resilient future.

Foreword

This major research portfolio is presented in fulfillment of the requirements for the Masters in Environmental Studies (Planning) Program. Grounded in my Area of Concentration, "Planning for Equity in a Polycentric Toronto Region," the research is structured around the three core learning components of my Plan of Study: 1. Polycentrism; 2. Equity Planning; 3. 15-Minute City/Complete Communities. This portfolio represents the culmination of my coursework over two years of graduate studies, enriched by valuable internship experiences and insightful discussions with my supervisor and professors.

Below are the learning objectives from my Plan of Study that are addressed by the three papers of this portfolio.

Learning Objectives of Polycentrism Component

1. **To obtain foundational knowledge of polycentrism in a capitalist world:** Achieved through examining capital accumulation and market orientation in suburban real-estate development in the Toronto region, as detailed in the Polycentrism paper.
2. **Examine the economic implications of polycentrism, investigating its impacts on capital accumulation, economic resilience, and regional competitiveness:** Addressed by discussing polycentrism's impact on these areas, including competition among Toronto's peripheral municipalities driven by internalized globalization.
3. **To evaluate case studies with successful polycentric spatial forms to identify contributing factors and challenges:** Objective met through analyzing the Yangtze River Delta Economic Region for economic efficiency and the Beijing case for addressing income polarization.
4. **Explore the influence of governance structures on the adoption of polycentric planning, with an emphasis on the role of cooperation and coordination among diverse stakeholders:** Examined in the third paper on the Dissolution of Peel Region, highlighting the Metamorphosis Network's collaboration with the Peel Region government and the importance of a bottom-up governance approach.
5. **Develop the capability to compare cities embracing polycentrism with those maintaining centralized/monocentric models, analyzing the advantages and disadvantages of each approach:** Addressed in the first paper by comparing Toronto's centralized hierarchy with global case studies, discussing the advantages and disadvantages of both models.
6. **Acquire insights into how the Toronto region can transition its planning paradigm toward a polycentric spatial form:** Examined through historical and ongoing shifts in Toronto's urban development since the 1950s, showcasing significant suburban growth and the move towards a polycentric regional structure.

Learning Objectives of Equity Planning Component

1. **Gain a basic understanding of equity planning principles by exploring historical context and basic theoretical frameworks related to equitable urban development:** This objective is addressed in the third paper on the Dissolution of Peel Region, which examines theoretical frameworks of equity by comparing it with equality. Unlike equality,

which promotes equal distribution of resources, equity takes into account varying degrees of needs.

2. **Develop the capacity to examine the role of governance structures and policies in shaping equitable urban development, considering how decision-making influence the distribution of resources and opportunities:** This objective is achieved through the discussion of the Metamorphosis Network's role in service provision within the Peel Region. When the Peel Region Government was unable to adequately provide services to residents due to systemic underfunding, these non-profit organizations stepped in to support the vulnerable community that are in need, thereby fostering an equitable distribution of resources.
3. **Explore potential challenges and criticisms related to equity planning, considering competing interests and various perspectives:** Discussed in the second paper on 15mC, highlighting the risk of gentrification and displacement in efforts to revitalize marginalized areas.
4. **Gain an understanding of how equity planning and polycentrism can work together to contribute to a more equitable Toronto region:** Explored in the Peel paper, which discusses a pluralistic approach to service provision aimed at creating an equitable distribution of resources.

Learning Objectives of 15-Minute City/Complete Communities Component

1. **Understand the necessary prerequisites for the potential adoption of the Complete Communities/15-Minute Cities model within the Toronto region:** The objective is addressed in the 15mC paper, where I examine the current spatial form of Toronto region and analyze relevant case studies. This exploration helps identify the infrastructural, social, and policy prerequisites needed to successfully implement the 15mC model in the Toronto region.
2. **Explore the key principles and characteristics of successful 15-minute city/complete community model to understand their contributions to sustainability, accessibility, and community well-being:** Addressed in the 15mC paper, which revolves around Carlos Moreno's vision for the 15mC. By discussing the key principles and characteristics of the model, this paper demonstrates how these elements contribute to sustainability, accessibility, and the overall wellbeing of communities.
3. **Learn to access potential challenges and limitations linked to transitioning existing urban areas in the Toronto region into 15-minute cities:** Similar to Objective 3 of the Equity Planning Component, this is addressed in the second paper 15mC. The paper examines the limitations of the 15mC concept, including risks of gentrification and displacement. By examining these challenges, the paper provide insight into obstacles and potential adverse effects that need to be considered when transitioning to a 15mC model in existing urban areas.

This portfolio reflects my passion and commitment to envisioning an alternative pathway for the Toronto region, diverging from the established centralized urban hierarchy. It aims to offer a new perspective on transforming the current urban growth patterns in the region. My research is structured into three distinct papers, each exploring polycentricity from various levels and scales. Ultimately, these papers come together to advocate for dismantling hierarchical governance and growth structures, fostering a region that is pluralistic, democratic, and equitable. Through this

work, I hope to contribute meaningfully to the discourse on urban planning and provide practical insights for fostering sustainable and inclusive development in the Toronto region.

Acknowledgement

I would like to express my deepest gratitude to those who have supported me throughout the journey of completing this major research portfolio.

First, I extend my heartfelt thanks to my supervisor, Roger Keil, for his invaluable guidance, insightful discussions, and unwavering support. His expertise and encouragement have been instrumental in shaping this work.

I am profoundly grateful to my family for their continuous encouragement and understanding. Special thanks to my mother, whose unwavering support has been my backbone, and to my grandmother, who was my inspiration and always believed in me.

Lastly, I acknowledge the assistance of AI (ChatGPT) in refining some sections of the portfolio. While the AI contributed to revising sentence structures and enhancing grammar, the ideas, discussions, and overall content presented are entirely my own and based on the thoughts and research of various scholars.

Portfolio Introduction

The central theme of this portfolio is polycentrism, which advocates for the development of multiple interconnected centres of activity and governance within an urban environment. This concept challenges the traditional centralized urban hierarchy, offering a transformative perspective for urban development and governance in the Toronto region. The significance of this research lies in the need to re-evaluate and redefine Toronto's current development approach. As one of the most rapidly growing urban areas in the world, Toronto, like many other urban centres, faces challenges related to spatial organization, resource allocation, and social inclusivity and equity. Exploring polycentric urbanism provides a unique perspective that could potentially enhance the efficiency and sustainability of the region's development.

This portfolio aims to illustrate how polycentricity can improve the region's overall dynamics. Through its three individual papers, it demonstrates how a polycentric approach to growth, development, and governance can lead to a more equitable, democratic, sustainable, and resilient urban future.

By fostering multiple centres of activity, polycentrism ensures an even distribution of economic growth, amenities, and social services across a broader area, reducing the strain on any single core and promoting balanced development. This approach not only mitigates congestion and environmental impact but also empowers local communities by bringing essential services and decision-making processes closer to residents.

To comprehend the concept of polycentrism, it is essential to start with its manifestations in the built environment. Cladera et al. (2009, pp. 2841) highlight that the traditional monocentric model, characterized by a centralized hierarchy with a clear distinction between core and periphery, is no longer the predominant framework for urban development. This shift is further

explained by Copus (2001, pp. 539), who describes the polycentrism as the process of dispersing growth from the core to peripheral regions.

However, this portfolio's approach to examining polycentrism extends beyond the mere decentralization of the built environment. It also advocates for a pluralistic approach to service delivery (Howarth, 2011), emphasizing the importance of multiple centres of decision-making, where residents have greater autonomy and opportunities. Additionally, a polycentric approach to urban living is exemplified by self-sufficient 15-minute cities (Moreno et al., 2021; Moreno, 2024). In this model, individuals no longer need to gather in a single traditional centre. Instead, they can meet their daily needs within their own neighbourhoods. This approach establishes multiple centres beyond the traditional core, each capable of fulfilling everyday necessities.

The first paper, "Polycentric Perspectives: Reimagining Urban Development in Toronto," delves deeply into this concept. It explores how reorganizing the socio-economic and socio-cultural spheres of the Toronto region into a polycentric structure can drive more inclusive and sustainable growth. This paper examines the forces driving capital accumulation and market orientation in suburban real-estate development (Ekers et al., 2012), highlighting the economic implications of polycentrism on capital accumulation, economic resilience, and regional competitiveness (Keil & Addie, 2016; Belina & Lehrer, 2016). It also evaluates successful polycentric regions like the Yangtze River Delta Economic Region (Jia & Zhong, 2022; Gao et al., 2022; Luo & Shen, 2018; Li & Liu, 2018; Li et al., 2018) and Beijing (Sun et al., 2023; Lin et al., 2015), identifying factors that contribute to their success and the challenges they face. By comparing polycentric and monocentric models, the paper offers insights into how the Toronto region can transition towards a polycentric spatial form, ensuring a more balanced distribution of growth and enhancing economic vitality.

The second paper, "Redefining Urban Living: The 15-Minute City Concept in the Toronto Region," brings the discussion of polycentrism to a micro-scale, exploring how the 15-Minute City (15mC) concept can contribute to a polycentric urban structure. Inspired by Carlos Moreno's vision, this paper proposes the creation of self-sufficient neighbourhoods where all essential services and amenities can be accessed within a 15-minute walk or bike ride (Moreno et al., 2021; Moreno, 2024). This model aims to reduce car dependency, promote densified living, and break down the centralized hierarchy of daily life in urban regions. By examining the key principles and characteristics of successful 15mC concepts, this paper illustrates how these elements enhance sustainability, accessibility, community well-being, and, most importantly, self-sufficiency. Each neighbourhood becomes independent yet interconnected, thereby aligning to core principles polycentrism.

The third paper, "The Pillars of Service Provision in Peel: A Shift Toward Polycentricity in the Nearly Dissolved Peel Region," explores the practical application of polycentric principles in service delivery. The proposed but subsequently rescinded dissolution of Peel Region serves as a case study to demonstrate the benefits of community-led governance. In this model, services are customized to meet the specific needs of diverse communities, including youth, new immigrants, and the homeless. The paper highlights the collaboration between the Metamorphosis Network and the Peel Region government, emphasizing the importance of a bottom-up, network-based approach over a top-down hierarchical model for delivering essential services. By examining the role of governance structures and policies in promoting equitable urban development, this paper underscores how equity planning and polycentrism can work together to create a more democratic and accessible Toronto region.

Polycentric Perspectives: Reimagining Urban Development in Toronto

Abstract

The Toronto region has undergone significant transformations, especially since the post-war era when its modern spatial form began to emerge. This paper examines the distinct qualities of polycentricity using the Toronto region as a case study. The discussion explores the suburban realities of Toronto's peripheries and the inner-city, highlighting the evolving relationship between these spaces. The Toronto region is increasingly becoming multcentred as suburbs, once subsidiary to Toronto, evolve into independent economic players. Additionally, this paper provides an alternative perspective on the neoliberal attributes contributing to the ongoing outward expansion of the region.

By employing literature review and case study analysis, I argue that reorganizing the socio-economic and socio-cultural space of the Toronto region toward a polycentric environment will bring extensive benefits and that the region is gradually becoming polycentric. This approach aims to dismantle centralized hierarchies and rethink how regions function, ensuring a more democratic, socially equitable, and sustainable future for the Toronto region. I also argue that it is crucial to adopt a pluralistic approach to growth and governance. By doing so, we can move away from the established centralized hierarchy and toward a more democratic, poly-nucleated urban structure.

Introduction: Literature Review of Polycentrism and Concepts

Many scholars have researched polycentricity and its application to urban regions. The concept of polycentric spatial form represents a significant shift in urban planning paradigms (Cladera et

al., 2009; Copus, 2009; Grunfelder et al., 2015; Lin et al., 2015; Zhang et al., 2021; Lv et al., 2017; Li et al., 2018; Kwan & Seo, 2018; Lambregts, 2006; Derudder et al., 2021).

Scholars argue that there is a significant shift from traditional concept of a compact city focused on a single downtown region (Filion, 2018), which emphasizes high-density residential areas and prolific public transit, to more decentralized patterns of urban growth (Copus, 2009, pp. 539).

However, it is essential to distinguish between different forms of decentralization. Growth that occurs at the city's edges, leading to lower-density development that is typically car-dependent (Zhang, 2006; Keil & Ucoglu, 2022) does not necessarily create new centres of activity or reduce the importance of the primary downtown core. In contrast, polycentric development focuses on establishing multiple centres within an urban region, each with its own set of amenities and economic functions. This model reduces the reliance on a single downtown area and aims for a more balanced urban growth. It is important to understand that urban sprawl and polycentric growth are not mutually inclusive. Cities can expand without developing multiple centres, and polycentricity can be driven by various factors, including economic functions (Ekers et al., 2012; Belina & Lehrer, 2016) and division of workforce (Addie & Keil, 2016), rather than merely the outgrowth of existing urban areas.

Cladera et al., argue that the traditional monocentric model is no longer the predominant framework for urban development (2009, pp. 2841). Their argument is based on empirical data from the Metropolitan Region of Barcelona. Instead, there have been a transition toward a polycentric model, which can be observed through the widespread residential decentralization starting from the 20th century. This shift, along with significant congestion in core urban areas, have contributed to the relative decline of CBDs (pp. 2841). As a result, subcentres have emerged within the same geographic urban regions, decentralizing urban functions and activities.

In the context of my research, which focuses on the Toronto region, similar trends of decentralization and congestion can also be observed.

As Copus examines in his article on the impetus for polycentricity, the dispersion of growth from the core into the periphery regions has resulted in the traditional policy focus on improving transportation and communication infrastructure due to the distance of the periphery areas from the core (Copus, 2001, pp. 539). The periphery areas often suffer from a series of disadvantages such as increased travel and transport costs that are expressed either in financial or time penalties (pp. 540), the second would be the absence of agglomerative advantages such as economies of scale due to the high cost of service provision and relatively low rate of entrepreneurship and innovation when compared to the traditional core (pp. 549), lastly, the final disadvantage that is often associated with the periphery would be its inequality between the core, such as cases of poorly developed local and interregional infrastructure and generally a lack of influence on the wider governance arena (pp. 540)

There has been research that has focused on the effectiveness of adopting polycentricity in tackling chronic issues that are seen in many cities such as urban inefficiencies and congestion (Lin et al., 2015). Different scholars have focused on major cities across the world, as demonstrated by Lin et al., in 2015, they discussed the impact of polycentric urban development on commuting patterns in Beijing using evidence from its four sub-centres, that demonstrated causal cases where the dispersion of a singular employment centre into polycentricity has alleviated the congestions and decreased the commuting time which will be further explored in a later section. This is not a singular case, Grunfelder et al., have also discovered a correlation between the dispersion of employment centres and the impact on commuting time in their article written in 2015. The effect of polycentrism has been extensively studied across various global

urban centres, revealing a clear correlation between employment distribution. The diffusion of economic activities across multiple centres diminishes the reliance on a single location, effectively de-stressing road networks and alleviating the need for concentrated commuting.

A common difficulty that arises when studying the concept of polycentricity in urban regions is the measurement of polycentricity. Generally, as scholars examine polycentricity in urban regions, there are two dimensions to consider: morphological and functional polycentricity (Kwon & Seo, 2018, pp. 2). Morphological polycentricity is focused on spatial form of an almost equally sized urban system determined by employment centres, with historically separated centres that are fragmented but connected through transportation development (Addie, 2016; Kwon & Seo, 2018, pp. 2).

On the other hand, functional polycentricity emphasizes the flow and interaction between cities. In context to this chapter, it refers to the interactions and economic exchanges between Toronto and its surrounding municipalities, facilitated by a network of economic connectivity (Belina & Lehrer, 2016; Kwon & Seo, 2018; Li & Liu, 2018; Keil & Addie, 2016; Lambregts, 2006).

Concentrating on the specific context of the Toronto region, Keil and Addie discuss this process that is characterized by the opening up of central cities to their wider regions through expanded infrastructure networks and the proactive embrace of internalization strategies aimed at creating a more resilient form of governance across various scales (Keil & Addie, 2016, pp. 103). To add on, this enhanced connectivity and growth of the municipalities in the Toronto region in the context of internalized globalization has induced inter-municipal competition among the cities (Belina & Lehrer, 2016, pp. 87).

To further expand on this, internalized globalization in the Toronto region's context recognizes that these suburban cities of Toronto have begun to establish their own global identity that is independent of Toronto itself, yet at the same time, uneven development is evident within the region (Belina & Lehrer, 2016, pp. 84). The competition amongst the cities has led to the beginning of decentralization and the diversification of economies and infrastructure. Through the growing inter-municipal competition amongst the cities, they compete with one another by creating attractive economic opportunities for international businesses to establish in their city to grow the economy.

Another component is neoliberalism in the context of urban growth. Scholars like Ekers et al., have placed great emphasis on the relationship between capital and the process of suburbanization (Ekers et al., 2012, pp. 413). They talked about how it is the inherent character of the market that results in the continuous pursuit of capital accumulation, as Cox (2010, pp. 217) said, capital drives urban spatial forms in the pursuit of the expanded reproduction of capital. It was for the pursuit of capital gains that people were incentivized to continuously expand the urban region outwards, ultimately resulting in the current urban spatial form today.

Scholars have also tackled the issue of why certain urban regions are lagging in terms of service provision (Khavarian-Garmsir et al., 2023; Addie, 2016, pp. 132). There are disconnects of infrastructure, governance, economic impetus, and social aspects that impede the growth of the urban region.

To expand on the topic of regional disconnect and the system of interconnectedness in urban governance, we need to view the issue at a top-down level which points to the concept of New Regionalism. This concept has garnered significant attention from scholars and policymakers (Glass, 2018; Wood, 2007; Bristow, 2018; Brunet-Jailly & Arcand, 2016).

Serving as a new perspective to address chronic issues found in urban regions such as fragmentation (Addie, 2016, pp. 132; Glass, 2018, pp. 1155), new regionalism offers an approach to broaden the scope of regional governance (Glass, 2018, pp. 1150) and cooperation that emphasizes collaboration (Spicer, 2016; Taylor, 2022, pp. 140), to effectively tackle shared challenges and advance collective interests. The approach seeks to confront common challenges and pursue shared goals, thereby promoting a more integrated and resilient regional development. Furthermore, new regionalism can play a pivotal role in encouraging polycentrism by acknowledging the economic interdependence among cities within a given region.

A cornerstone of the new regionalism framework is its commitment to collaborative decision-making processes. Scholars have emphasized the significance of bringing together diverse stakeholders in these processes (Geva & Siemiatycki, 2023). This inclusive approach not only facilitates a more comprehensive lens on regional issues but also enhances the effectiveness of governance strategies.

In conclusion, research on polycentricity underscores a shift in urban growth from a singular centre to a more multiplicated approach. This concept offers potential solutions to challenges such as congestion and regional fragmentation. The influence of neoliberalism remains pivotal in driving ongoing expansion, while the principles of new regionalism promote collaborative efforts among cities within a region. As urban centres evolve and expand, these concepts will play a vital role in fostering sustainable and inclusive urban environments.

Discussing the Successes and Failure of Polycentricity through Case Studies

Polycentricity offers numerous benefits and costs, as observed in various case studies worldwide. Increased economic efficiency and issues of polarization are some aspects that can be addressed through polycentricity in urban regions.

One significant benefit of polycentricity development is its impact on public transport networks. In a single centralized urban area, a top-down approach that determines optimal transport services based on demand is common (Cats & Birch, 2021, pp. 2). However, the growth of public transport network results from a sequence of interdependent investment decisions influenced by a dynamic interaction between travel demand and service provision (pp. 2). Cats and Birch's research on global cities such as Tokyo and London demonstrate that expanding the network from the centre to outer areas is driven by increased demand in these peripheral regions, forming in a radial, tree-like structure (Cats & Birch, 2021, pp. 6). As demand becomes more uneven, the network grows increasingly fragmented and disconnected. This highlights that polycentric region, with multiple centres emerging outside the original core, has the potential to incentivize development.

This is just one example of how polycentricity impacts urban regions, showcasing its potential to foster development through a more distributed network of centres.

Yangtze River Delta Economic Region – Economic Efficiency and Growth

An example of economic efficiency and growth that are found from the collaboration amongst municipalities in a polycentric relationship would be the Chinese Yangtze River Delta economic region (Jia & Zhong, 2022). This region exemplifies the advantages of a polycentric environment, particularly through Shanghai's significant role in both the Chinese and global economic and its

cohesive relationship with surrounding municipalities. The rise of global city-regions signifies the spatial reorganization of China's economy and evolving governance during its transition toward a market-oriented economy and greater global integration (Wu, 2018, pp. 117).

However, it is crucial to acknowledge that urban polycentricity is scale-dependent (Zhang et al., 2021, pp. 89). A city can be both monocentric and polycentric depending on the observed scale and its connections with neighbouring cities. In China, peripheral communities are often considered urban districts of the central city (Ren et al., 2021, pp. 41). In contrast, the Toronto region's suburbs operate as independent municipalities.

To further illustrate this, Zhang et al.'s analysis, primarily based on population and density data of cities in the Yangtze River Delta Economic Region, reveals that monocentric patterns are prevalent in city districts of prefecture-level and higher cities (Zhang et al., 2021, pp. 92). This indicates that different city districts of Shanghai and nearby county-level cities, for example, function as subsidiaries of Shanghai's central core region, as shown in the diagram below.

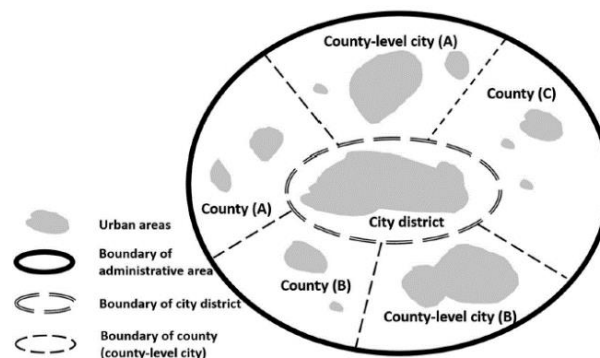


Figure 1 City region polycentricity (Source, Zhang et al., 2021)

In contrast, urban areas of prefecture-level and above cities exhibit a more polycentric pattern when compared to subsidiary cities (Zhang et al., 2021, pp. 92). This means that autonomous

cities in the delta, such as Hangzhou and Cangzhou, are considered independent, as depicted in the chart below, yet maintain economic ties with Shanghai through cooperation.

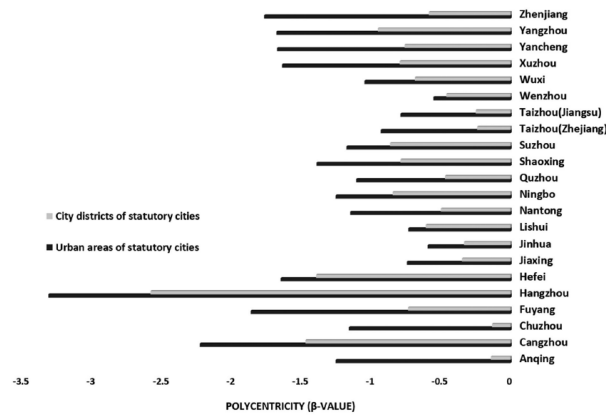


Figure 2 Polycentricity Values in Yangtze River Delta (Source: Zhang et al., 2022)

The Yangtze River Delta region in China holds significant importance for economic development and its relationship with the global economy, largely due to the Yangtze River Delta Economic Coordination Committee (YRDECC). This region boasts the highest degree of regional integration in China (Gao et al., 2022, pp. 1680-81). The polycentric development of cities within the delta serves as a crucial platform for China's participation in international competition and integration into the global economy (Gao et al., 2022, pp. 1682). According to Gao et al., the cooperation among cities in the YRDECC extends beyond economic collaboration to include promoting China's green development strategy, environmental protection, energy conservation, and emission reduction (pp. 1682).

The driving force behind these municipal cooperations is to overcome regional limitations and establish region-wide mechanisms for dispute resolution, environmental supervision, and emergency response in the delta. Additionally, Luo and Shen (2009, pp. 56) discovered that by tracing the cooperation amongst the cities, there was a tendency to establish a common market

which can be seen as a strategic partnership (Li & Liu, 2018; Li et al., 2018). The collaboration between the cities produces a larger frame of economies of scale by utilizing the strength of all members in the delta.

In conclusion, the Yangtze River Delta Economic region exemplifies polycentric synergies, such as economic growth through a shared common market and collective efforts to compete on the international stage within other global urban regions. This phenomenon mirrors the trajectory of cities within the Toronto region, such as Markham and Mississauga, which have experienced similar evolution that they integrate into the local and global economy.

Beijing – Income Polarization

Sun et al.'s (2023) research on Chinese cities found that polycentric cities can significantly mitigate income polarization. They explain that income polarization reflects the degree of concentration in population and development distribution (pp. 380). This phenomenon traps low-income groups in long-term poverty, making it difficult to elevate their social status (pp. 380).

The study highlights that polycentric cities benefits from a “borrowed size” effect, which facilitates economic sharing among cities within a polycentric structure. This enhances regional economic potential, creates multiple employment centres, and effectively alleviates income polarization (Sun et al., 2023, pp. 380). In addition, smaller and medium-sized cities within a polycentric system can utilize the infrastructure of larger cities due to their geographic or functional connectivity.

Moreover, the impact of polycentric cities on economic productivity is closed tied to population density. In areas with high population density, a polycentric structure can significantly boost

economic productivity (Sun et al., 2023, pp. 381). This is particularly relevant to the case study of Beijing and its employment centres.

The Beijing case study focused not whether polycentricity has induced cooperation between cities, but on inner-city districts, particularly concerning income polarization. As a result of transitioning from a planned to a market-driven economy in the early 1980s, Beijing's economic and urban spatial landscapes have been significantly transformed in terms of employment layout (Lin et al., 2015, pp. 197). Beijing is evolving from a traditional monocentric city to a post-industrial polycentric city characterized by the development of high-tech industrial zones and knowledge-intensive service clusters. Both market forces and government development management have played vital roles in this transformation. The emergence of new economic clusters has gradually become a vital driver of urban growth and spatial restructuring (pp. 197).

The case of Beijing highlights the significant influence of four economic sub-centres: the Central Business District (CBD), Financial Street (FS), Zhong Guan Cun (ZGC), and the Yi Zhuang Development Zone (YDZ). These sub-centres play crucial roles in shaping the employment and residential patterns within the Beijing urban region (Lin et al., 2015; Lv et al., 2017).

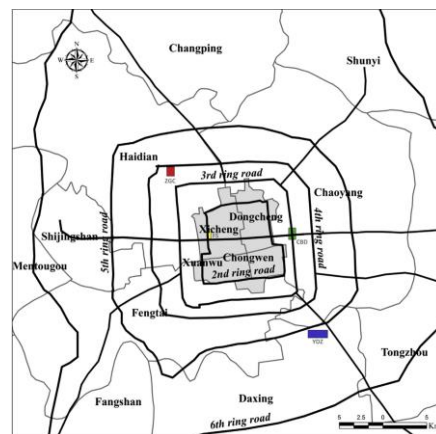


Figure 3 The location of the four sub-centres (Source: Lin et al., 2015)

As depicted in the figure above, the four subcentres act as key employment hubs in Beijing's inner suburbs, contributing to a spatial layout characterized by multiple concentric "Ring Roads" encircling the central city (Lin et al., 2015, pp. 197, 199). This strategic placement of employment centres has resulted in a polycentric economic structure.

The concentration of employment opportunities in these subcentres creates a magnetic pull on the working population, fostering a clustering effect as individuals seek jobs closer to their residences (Lv et al., 2017). This phenomenon leads to a dispersion of the workforce throughout the city, reducing the necessity for extensive commutes to a single urban core.

Jobs-housing relationship in four sub-centres (%).

Home address	CBD (N = 151)	FS (N = 136)	ZGC (N = 152)	YDZ (N = 139)
Workplace and housing in the same district	51.0	36.8	61.8	71.9
Housing in the main urban area (inner city and inner suburbs)	24.5	50.7	28.3	10.1
Housing in the outer suburbs	24.5	12.5	9.9	18.0

Figure 4 Job-housing relationship in four sub-centres (%) (Source: Lin et al., 2015)

The chart above illustrates the influence of employment on the spatial pattern of Beijing. Workers employed in the four sub-centres are more likely to live in the same district as their workplace. Although proximity to work is not the only factor determining a worker's home location, it significantly influences the decision-making process by reducing commuting time (Lin et al., 2015, pp. 201, 204).

Further emphasizing the fact that the polycentric spatial patterns of employment centres are crucial in alleviating income polarization. By creating more employment centres around the city, the population becomes more dispersed, providing more opportunities for employment and reducing competition for limited jobs in a single centre. Strengthening connectivity between

central and non-central areas enables residents to access more employment opportunities and alleviates income polarization (Sun et al., 2023, pp. 385).

This case emphasizes the importance of a balanced distribution of jobs and housing in subcentres to shorten commuting distances and create more opportunities. The location and composition of these subcentres play a pivotal role in shaping the spatial distribution of the city, offering valuable insights into the importance of decentralizing employment targeting income polarization through polycentricity.

Randstad and Sydney – Failure

Unlike the Yangtze River Delta, where cities are interconnected within an urban network and focus on fostering internal competition to compete globally, the case examines the commuting pattern resulting from the polycentric spatial form of the Randstad region and their potential inefficiencies.

The Randstad region, located in the west of Netherlands, includes several equally significant cities such as Amsterdam, Rotterdam, The Hague, and Utrecht (Lambregts, 2006; Ritsema van Eck & van der Wouden, 2020). From the 1960s to 1975, a combination of suburbanization and spatial planning altered the region's population distribution, leading to a classic pattern of urban sprawl. During this period, larger cities in the region lost a substantial amount of their population while smaller municipalities grew (Ritsema van Eck & van der Wouden, 2020, pp. 154).

A notable distinction between Randstad and the Yangtze River Delta region lies in their organizational structures. While the cities within the Yangtze River Delta operate as a cohesive unit, engaging in internal competition while collectively striving for global competitiveness, Randstad struggles with fragmentation (Ritsema van Eck & van der Wouden, 2020, pp. 154).

Despite business relations and commuting between cities for work, school, or shopping, fragmentation remains a significant issue in Randstad. This fragmentation hinders cooperation and undermines the region's competitive edge (Lambregts, 2006).

Table 7.1 Commuting to work in the Randstad ×1,000

	1995–1999			2012–2016		
	<i>Abs</i>	<i>% Jobs</i>	<i>% Workers</i>	<i>Abs</i>	<i>% Jobs</i>	<i>% Workers</i>
Within urban regions	1,621	72	78	2,009	66	73
Between urban regions	295	13	14	522	17	19
From elsewhere to urban regions	332	15		519	17	
From urban regions to elsewhere	164		8	233		8
Total jobs in urban regions	2,249	100		3,050	100	
Total workers in urban regions	2,080		100	2,764		100

Source: Authors, based on data from OVG/OVIN Mobility Surveys and LISA employment register.

Figure 5 Commuting to work in Randstad (%) (Source: Ritsema van Eck & van der Wouden, 2020)

From the data presented by Ritsema van Eck and van der Wouden, it is evident that the percentage of workers commuting between cities in Randstad region decreased from 78% between 1995-99 to 73% between 2012-16 (pp. 157). They also collected data on travel for higher education (pp. 162), shopping trips (pp. 163), and social visits (pp. 163), all of which have seen declines over the years. This data indicates that a slow growth in the importance of Randstad's urban network (Lambregts, 2006); Ritsema van Eck and van der Wouden, 2020).

The case of Randstad's relatively unsuccessful cooperation highlights that polycentrism is not a universal solution for urban region development. It serves as a counterpoint to the overly optimistic belief that polycentric spatial development can address all urban and regional challenges (Lambregts, 2006, pp. 121).

Another example of a relatively unsuccessful polycentric urban region is Sydney's plan for a second international airport located outside of the Cumberland Plain (Graus et al., 2024, pp. 2).

After World War II, Sydney's metropolitan planning aimed to end unplanned urbanization, leapfrogging land speculation, and ribbon development on the Cumberland Plain (pp. 1). Plans such as the 1948 Cumberland County Plan and the 1968 Sydney Region Outline Plan intended to create multiple metropolitan centres but were hampered by poor governance, high infrastructure costs, speculative pressures, and fluctuating political support (Graus et al., 2024, pp. 2).

More recently, the push for developing the Western Sydney Aerotropolis represents an ambitious attempt to restructure Greater Sydney into a polycentric metropolis. This project aims to create high-value jobs in Western Sydney to address historical job deficits and socio-economic polarization (pp. 3). Despite various plans and strategies, including the 2005 City of Cities and the 2018 Metropolis of Three Cities, the divide between job-rich Eastern Sydney and the Western periphery remains stark. The 2018 plan embraced familiar pro-growth and global city themes as principal drivers but reimagined a metropolis of three distinct "cities," virtually eliminating the trope of periphery (pp. 3).

Currently, the Western Sydney Airport project is progressing, but there are concerns about the economic viability of creating global significant jobs far from Sydney's CBD. Despite significant efforts and ambitious plans to achieve a polycentric urban structure in Sydney, the outcomes have been stagnant and mixed after half a century of stop-start politicking and planning (pp. 9). The goal of balanced and polycentric metropolis remains a work in progress with many uncertainties ahead (Graus et al., 2024, pp. 7).

These cases of Randstad and Sydney demonstrate that polycentricity in urban region is not a guaranteed success. The ineffectiveness of cooperation within Randstad and the political and developmental stagnation in Sydney's second airport project illustrate that they can be failures in creating a polycentric region. In the case of the Toronto region, there may even be the possibility

that cooperation between the centre and periphery will be negligible, as it has not yet fully materialized.

Toronto Region Spatial Context and Factors Contributing to Polycentricity

In this section, I argue that several factors, including spatial and population growth, legislation, freight centres, and land use patterns, are pivotal in shaping the current spatial context of the Toronto region. These factors promote the development of suburban peripheries and contribute the establishment of polycentricity in the area.

Formulation of Toronto

This chapter explores the implications of polycentricity in urban regions and demonstrates how it can yield benefits through neo-liberalistic approaches and initiatives. To do so, we first need to understand the history and multiple restructuring of the Toronto region, particularly through the lens of its suburban areas.

Before the 1950s, Toronto experienced a significant population boom due to both local growth and the return of populations after World War II. New residents built homes on the city's fringe, creating diverse suburbs that housed both working-class and upper-class residents (Harris, 2015, pp. 31-32). These owner-built homes were constructed on privately owned land for personal use.

In the 1950s, the suburban landscape further diversified with the expansion of lower-class settlements and an influx of immigrants from Eastern and Southern Europe and the British Isles

(Harris, 2015, pp. 32). During this period, owner-builders remained active, but building inspectors became stricter as formal land-use planning was introduced (White, 2016).

In 1953, the Province of Ontario established a new level of government, uniting several suburban municipalities with Toronto to form Metropolitan Toronto (Harris, 2015, pp. 32; *The Changing Shape of Ontario: Municipality of Metropolitan Toronto and the Regional Municipality of York*, n.d.) This new region invested heavily in infrastructure, such as water pipes, sewers, roads, schools, and public transit (Friskin, 2007, pp. 130-136; Harris, 2015, pp. 32). These developments standardized the suburbs, shaping neighbourhoods with arterial grids (Filion, 2018).

In the 1950s and 60s, inner-city neighbourhoods and suburbs attracted new immigrants (Mann, 1961). Due to inner-city stigma and middle-class flight, Toronto's land had to be redeveloped to accommodate the growing population. Between 1952 and 1962, about 1% of Toronto's land was redeveloped (Harris, 2015, pp. 33).

The suburbs and the city continued to grow over time. During the 1960s and 70s, federal cost-sharing policies incentivized provinces and municipalities to build more public housing (Harris, 2015, pp. 33). However, this trajectory halted in the 1970s when over 70% of all Metropolitan Toronto suburbs continued public housing (Friskin, 2007, pp. 169; Harris, 2015, pp. 33). Despite this, Toronto's population continued to grow, surpassing other major Canadian cities like Montreal, reaching a population of 2.7 million (CMA, n.d.). With increased density, these neighbourhoods were now considered to be unattractive due to poor public transit services.

During this period, there was a proliferation of office and apartment building construction. This led to the rise of NIMBY (not in my backyard) opposition in downtown neighbourhoods,

resulting in the election of a reform council to restrain high-density redevelopment by the 1970s (Harris, 2015, pp. 34). By 1990s, infrastructure deterioration and a country-wide recession prompted the Bank of Canada to raise interest rates 5-6% higher than the US (Bank of Canada, n.d.). The Canadian and Ontario governments downloaded service delivery responsibilities, leading to the formation of the new City of Toronto by amalgamating Metropolitan Toronto with its six lower-tier municipalities: East York, Etobicoke, North York, Scarborough, York, and the original city of Toronto, forming a single-tier city now known as the City of Toronto.

Suburban Toronto region and Polycentricity

The spatial form of the Toronto region has been significantly shaped by suburbanization, through this is not the sole factor. According to Filion (2018, pp. 125), since the post-war era, downtown Toronto has been highly accessible due to an extensive public transit network. However, this accessibility diminishes with increased distance from the city centre. Consequently, residents living farther from downtown cannot easily benefit from public transit. The adoption of Fordism in the post-war period, with its large-scale manufacturing and assembly line techniques, led to mass production of automobiles and made car ownership more affordable for average suburban families in Toronto. As car accessibility increased, suburban residents could occupy more urban space per person or economic activity (pp. 125). Thus, automobiles have facilitated the decentralization and dispersion of economic activities (Filion, 2018, pp. 125).

From the 1970s onward, the region's expansion revealed a multicentred pattern focused on Toronto's suburban centres (Harris, 2015, pp. 36). As Fishman noted in 1987 and Harris reiterated in 2015, *“the classic suburban, subsidiary to a single urban center, has been*

disappearing.” This observation suggests that suburbs, once secondary to downtown Toronto, no longer exist in a strict hierarchical relationship with the city centre.

Today, Toronto’s suburbs have developed significantly, accommodating larger populations and numerous businesses. While downtown Toronto remains the primary employment hub, many jobs are now located in suburban areas (Belina & Lehrer, 2016), either in polycentric clusters or dispersed patterns (Harris, 2015, pp. 36). Suburban employment has spread along highway office strips (Keil & Young, 2009; Harris, 2015, pp. 36). Additionally, suburban high-rise have emerged around retail nodes both in Toronto and suburban cities. Between 1960 and 2010, the population of the Greater Toronto Area (GTA) grew by 150%, reaching 5.5 million, while its urban footprint, or the amount of land occupied by urban development, expanded by 600% (Bourne et al., 2011, p. 237; Harris, 2015, pp. 36). According to the most recent census in 2021, the population has further increased to 6.2 million.

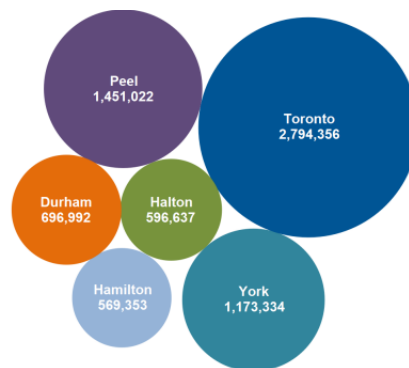


Figure 3 Population by Municipality, 2021, Greater Toronto and Hamilton Area (Source: Statistics Canada, Census 2021)

Legislation and Policies: Place to Grow and MZO

Socio-economic factors and historical events have contributed to the development of suburban cities around Toronto, but policies have also significantly shaped the region’s current urban form.

The “A Place to Grow: Growth Plan for the Greater Golden Horseshoe” outlines several key directives:

1. Section 2.2.3 Urban Growth Centres: Each suburban downtown should aim for 200 residents and jobs combined per hectare (The Government of Ontario, 2020, pp. 17).
2. Section 2.2.5 Employment: Major offices and institutional developments should be directed to these urban growth centres (The Government of Ontario, 2020, pp. 19).
3. Section 3.2.2 Transportation: The plan emphasizes providing multimodal access to jobs, housing, schools, cultural and recreational opportunities, and services (The Government of Ontario, 2020, pp. 32).

The implementation of the “A Place to Grow” Growth Plan mandates that designated downtown areas in suburban cities, such as Markham and Mississauga for example, must have at least 200 residents and jobs combined per hectare. The policies promote higher density and employment, identifying these downtowns as priority growth centres. These policies officially recognize suburban centres as priority growth areas, fostering development outside of Toronto.

The Minister of Municipal Affairs and Housing in Ontario holds the power to issue a Minister’s Zoning Order (MZO) under Section 47 of the Planning Act, allowing for the establishment or modification of zoning regulations for specific lands without the need for public consultation or appeal processes (Province of Ontario, 2023; The Government of Ontario, 2024).



Figure 4 Minister's Zoning Order (2024) Map (Source: Ontario - Yourstoprotect, 2024)

The figure above illustrates the current MZO zoning orders active across the Toronto region. Both the “A Place to Grow” Growth Plan and MZOs are tools used by the government to direct development in the Toronto area. The growth plan’s policies focus on developing suburban cities, fostering the creation of multiple centres in the region.

However, MZOs have increasingly become a means for bureaucrats to circumvent the democratic process in development decisions (Draaisma, 2024; Casey, 2023). CP24 reports that 18 MZOs were issued to developers who attended Ontario Premier Doug Ford’s family wedding, raising concerns that these orders were granted as favours rather than through a transparent, democratic process (Casey, 2023). Another controversial use of MZOs involves the redeveloping of Ontario Place to house a privately owned luxury spa on prime waterfront land in Toronto. Typically, such a redevelopment would need to undergo municipal planning approvals, environmental assessments, and heritage preservation compliance. Ford’s use of an MZO bypassed these requirements, undermining environmental protection and the integrity of local governance (Draaisma, 2024).

Freight Location in Toronto region

This section explores how freight patterns and infrastructure contribute to automobile centrality, which in turn has driven the development of suburban peripheries. As previously explained, residents of the Toronto region have become heavily dependent on automobiles as their primary means of transportation (Harris, 2015, pp. 42). Additionally, expressways and arterial roads have become crucial separators of land use (Filion, 2018, pp. 132). One reason expressways and arterial roads remain essential for urban residents is their primary function of enabling the flow of goods (Woudsma et al., 2016).

According to a study by Ferguson et al. (2014, pp. 47-48), data from the Ontario Ministry of Transportation shows that highways in the Toronto region are major corridors for the transit of goods. The figure below highlights Highway 401 in red (>25,001 annually) and orange (15,001-25,000 annually), indicating significant freight traffic. Although the sampling frame is limited to trucking companies with revenues of \$1.3 million or more (pp. 15), it is clear that the Toronto region is heavily used for the transport of goods (Woudsma et al., 2016; Ferguson et al., 2014).



Figure 5 Annual Average daily trucking traffic flows in GTA (2014) (Source: Ferguson et al., 2014)

The consequences of extensive freight infrastructure can induce suburban sprawl when urban expansion outpaces population growth (Woudsma et al., 2016, pp. 481-483). Highways enable warehouses and distribution centres to relocate from urban areas to more suburban and exurban locations (pp. 475).

The relationship between freight movement and suburban expansion may not be immediately apparent, but studies by Woudsma et al. (2016) and Woudsma and Jakubicek (2020) highlights this correlation. They emphasize that transportation infrastructure is often built to facilitate the efficient movement of goods to and from freight centres. Consequently, wherever freight centres are located, highways will connect to them. As highways extend beyond urban areas, freight centres follow, creating a cycle of expanding sprawl.

The logistics of the Toronto and Peel region illustrates the correlation between freight centres and suburban expansion. Between 2002 and 2012, the number of businesses in the Toronto

census division grew from 1,499 to 3,513, while Peel grew from 1,567 to 2,860 (Woudsma et al., 2016, pp. 481). Additionally, within the Toronto region, the number of warehouses increased by 38%, rising from 165 to 228 between 2002 and 2012, as shown in the figure below.

		2002	2012	2002-2012 change
GTA	Total Establishments	199,939	294,849	47%
	Number of Logistics (SIC 40-47) Establishments	4,315	8,981	108%
	Number of Warehouses (NAICS 493)	165	228	38%

Figure 6 Summary of logistics and warehouse data in GTA (Source: Woudsma et al., 2016)

Another factor contributing to the relocation of freight centre warehouses from urban centres to suburbs is the supply and demand dynamics in the real estate market (Woudsma et al., 2016, pp. 486). In the Toronto region, available land is decreasing due to ongoing real estate and infrastructure development (The Government of Ontario, 2020; Woudsma & Jakubicek, 2020). The rising costs associated with operating freight facilities within urban areas, coupled with encroaching residential and commercial developments, increase pressures on commercial rents throughout the region. Companies often opt for lower rents available in peripheral areas (Ekers et al., 2012). Furthermore, as freight centres require more space in a shrinking land supply, the trend towards relocating to the outskirts of urban regions intensifies.

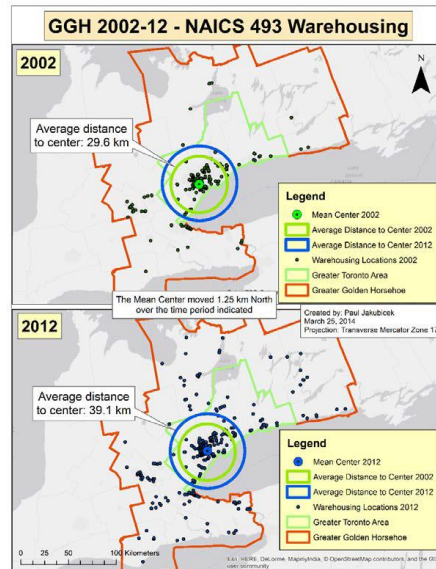


Figure 7 Sprawl of warehouses 2002-12 (Source: Woudsma et al., 2016)

Land Use Pattern in Toronto Region

This analysis of suburban land use patterns in the Toronto region is primary based on the findings of Pierre Filion in his article “The Morphology of Dispersed Suburbanism: The Land-use Patterns of the Dominant North American Urban Form.” Filion’s research examines the phenomenon of super-grids in the suburban belt of the southern portion of the Regional Municipality of York, specifically Vaughan, Richmond Hill, and Markham (Filion, 2018, pp. 123).

The primary objective of utilizing this source is to elucidate the factors that have shaped the suburban belt of Toronto region and to acknowledge the ongoing fragmentation within the region. This understanding is crucial for recognizing the emergence of polycentricity in the Toronto region.

By discussion the suburban spatial form, I aim to clarify why the Toronto region has developed its current structure and how municipalities contribute to creating a multi-centred, polycentric

urban area. It is important to recognize that as suburban cities have expanded, the traditional notion of a subsidiary city (Keil & Young, 2009; Filion, 2018, pp. 124; Harris, 2015, pp. 36) is no longer adequate to describe the peripheral municipalities of the Toronto region. Instead, a new term, “in-between city,” has emerged. This term described cities that are wedged between traditional urban centres – such as downtown Toronto – and rural areas on the outskirts of the Toronto region (Filion, 2018, pp. 124).

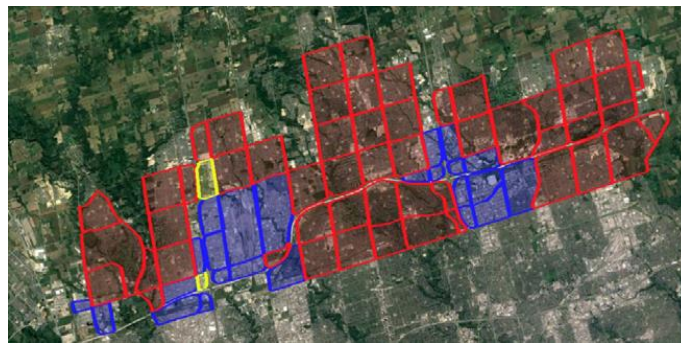


Figure 11 Super-blocks in southern portion of York Region (Source: Filion, 2018)

According to Filion, the adoption of super-grid street patterns in the southern York region, where there is already a well-established residential population, can be seen as an effort to protect these areas from the high traffic volumes generated by the dispersed suburban communities (pp. 130). Similar to the iron grid pattern prominently seen in downtown Toronto, which serves as the organizing principle for inner-city land use, super-grids act as the main spatial structuring agent for the dispersed suburbs (pp. 136). One of the primary purposes of these super-grids is to facilitate similar land use patterns within each block. Much of the areas shown in Figure 13 are predominantly covered by residential and employment super-blocks (Red = Residential; Blue = Employment Blocks) (pp. 132).

In the chart below, 43 of the super-blocks are residential, accounting for 54.4% of the total study area. Additionally, 62 of the 79 of the super-blocks are considered monofunctional, with 78.5% of them having a secondary land use occupying less than 10% of their area (Filion, 2018, pp. 132).

Super-block land use	Number	Per cent
Residential	43	54.4
Employment	18	22.8
Retail	1	1.3
Total mono-functional*	62	78.5
Residential-employment	6	7.6
Residential-retail	8	10.1
Employment-retail	1	1.3
Other: Theme park-residential, Airport-employment	2	2.5
Total more than one land use**	17	21.5
Total all super block	79	100

* Super blocks where the second land use occupies less than 10 per cent of their area

** Super blocks where the second land use occupies 10 per cent or more of their area

Source: Author's calculations

Figure 12 Super-block land use (%) (Source: Filion, 2018, pp. 132)

The high percentage of mono-functional zones highlights the role of expressways and arterial roads as key separators of land use. This separation is similar to how the locations of freight centres influence the placement of expressways, ultimately dictating suburban land use patterns. Filion's evidence suggest that suburban areas conform predominantly to a single land use pattern. Furthermore, he concludes that due to the design of the super-grid patterns, their connection to higher-order roads such as arterial roads, relies heavily on collector roads (Filion, 2018, pp. 130). This reliance results in the creation of secluded neighbourhoods within the grids.

To conclude, the historical development of Toronto, coupled with various influential factors, has driven residents toward suburban areas. These factors include policy decisions, strategic planning tools, the location of freight centres, and the distinctive land use patterns in the Toronto region.

Together, they have contributed to the growth of suburban cities on the periphery of Toronto. This is why I argue that as these suburban municipalities continue to expand and evolve, they contribute to polycentricity, with multiple centres of activity emerging and interacting within the broader region. These factors highlight the dynamic and interconnected nature of the suburbs and Toronto.

Neo-liberal Perspective of Internalized Globalization as a Gateway to Polycentrism

In addition to arguing that the current spatial form of the Toronto region is becoming polycentric and shaped by factors such as land use and historical development and discussing the benefits of polycentricity, this chapter will also examine a second argument. By exploring the relationship between neoliberal initiatives and real estate developments, it can be shown how these forces drive regional growth and progression, ultimately creating a polycentric urban region.

How did development come to the suburbs?

Over the decades, new centres developed in the suburbs have attracted people and stimulated the growth of employment hubs in their respective municipalities, forming polycentric clusters and dispersed patterns (Harris, 2015, pp. 36).

Throughout the years of growth in the Toronto region, both population and industries have been drawn to the suburban lands outside the inner city of Toronto through capital accumulation (Ekers et al., 2012). Capital has played a significant role in shaping the suburban landscape, serving as the driving force behind the development industry's heavy investment in the suburban lands of the Toronto region.

The rapid development of residential infrastructure in the Toronto suburbs is driven by inherent human interest in capital accumulation (Ekers et al., 2012). As Cox (2010) noted "*Capital drives*

(sub)urban spatial forms in the pursuit of the expanded reproduction of capital” (Ekers et al., 2012, pp. 414). This quote explains that the pursuit of capital has shaped the current suburban forms. By developing suburban lands, real-estate developers create new suburban spatial forms, motivated by the capital gains from selling these properties.

For example, suburban real-estate developers build new houses to create and sell new suburban spaces, driven by the potential profits. This process illustrates how the neoliberal ideology of capital accumulation influences suburban development. Logan and Molotch (1987) explain this by stating, “*Market themselves are the result of cultures; markets are bound up with human interests in wealth, power, and affection*” (Ekers et al., 2012, pp. 414). This perspective highlights that market dynamics and the drive for capital are deeply intertwined with human desires and societal values, fueling the growth and evolution of suburban areas.

In addition to direct capital gains, the neoliberal incentive to reduce operating costs has fueled the growth of centres outside of Toronto’s inner city. This expansion is driven by the relocation of industrial and technological firms to suburban municipalities. These companies seek strategic advantages and opportunities for capital accumulation (Ekers et al., 2012, pp. 414). Land rents and prices in suburban areas are significantly cheaper compared to operating in inner-city cores like downtown Toronto. As Ekers et al. (2012) have noted, the cost of developing greenfield sites is drastically lower than redeveloping brownfield sites in the inner-city core or inner suburbs. Land without prior infrastructure is generally more accessible for companies compared to previously developed land.

Moreover, jurisdictional fragmentation within the Toronto urban region can result in lower property and corporate taxes (Ekers et al., 2012), making these suburban areas even more attractive for companies. This combination of lower costs and potential tax benefits drives the

relocation of businesses to the suburbs, further contributing to the region's polycentric development.

Development Charges

Development charges vary significantly between municipalities, influencing where businesses choose to locate. A comparison between the suburban municipality of Pickering and the City of Toronto illustrates these differences.

City of Pickering - Seaton Lands Development Charges and Financial Impacts Agreement (FIA) Charges						
Development Charges (DC) By-law No. 7953/22 and FIA Article 5 for the period of July 12, 2023 - June 30, 2024. Reduced to 85% of maximum fee (Bill 23)						
DC By-law No. 7953/22	Per Residential Dwelling Unit by Type				Non-Residential Charges	
	Single and Semi-Detached Dwelling	Apartments - 2 bedrooms +	Apartments Bachelor and 1 Bedroom	Other Multiples	Non-Residential per ft ² of Total Floor Area ^a	(per net Ha of Prestige Employment Land in Seaton)
Other Services Related to a Highway	\$712	\$414	\$254	\$549	\$0.32	\$11,163
Fire Protection Services	1,123	653	401	865	0.51	17,652
Parks & Recreation Services	12,670	7,368	4,522	9,759	0.98	34,294
Library Services	2,333	1,356	832	1,797	0.18	6,394
Growth-Related Studies	224	131	80	173	0.03	1,034
Stormwater Management	439	256	157	338	0.20	6,905
By-law Enforcement Services	98	57	35	75	0.04	1,493
Transportation ¹	0	0	0	0	0.00	0
Total DC By-law No. 7953/22	\$17,599	\$10,235	\$6,281	\$13,556	\$2.26	\$78,935

Figure 13 Pickering development charge rate (Source: City of Pickering, 2024)

CITY OF TORONTO RESIDENTIAL DEVELOPMENT CHARGES RATES - NON-RENTAL PER DWELLING UNIT OR DWELLING ROOM EFFECTIVE MAY 1, 2024							
Service	Residential Charge By Unit Type						Percentage of Charge
	Singles & Semis	Multiples 2+ Bedrooms	Multiples 1 Bedroom and Bach.	Apartments 2+ Bedrooms	Apartments 1 Bedroom and Bach.	Dwelling Room	
Spadina Subway Extension	\$3,726	\$3,080	\$1,545	\$2,181	\$1,424	\$1,010	3.2%
Transit (balance)	\$45,204	\$37,364	\$18,743	\$26,463	\$17,273	\$12,250	38.5%
Parks and Recreation	\$17,212	\$14,227	\$7,136	\$10,075	\$6,577	\$4,665	14.7%
Library	\$2,367	\$1,956	\$981	\$1,385	\$904	\$641	2.0%
Housing Services - Shelter	\$0	\$0	\$0	\$0	\$0	\$0	0.0%
Housing Services - Affordable Housing	\$0	\$0	\$0	\$0	\$0	\$0	0.0%
Police	\$656	\$542	\$272	\$384	\$251	\$178	0.6%
Fire	\$246	\$203	\$102	\$144	\$94	\$67	0.2%
Ambulance Services	\$902	\$746	\$374	\$528	\$345	\$244	0.8%
Development-Related Studies	\$176	\$145	\$73	\$103	\$67	\$48	0.2%
Long Term Care	\$2,039	\$1,685	\$845	\$1,193	\$779	\$553	1.7%
Child Care	\$1,019	\$843	\$423	\$597	\$390	\$276	0.9%
Waste Diversion	\$820	\$678	\$340	\$480	\$313	\$222	0.7%
Subtotal General Services	\$74,367	\$61,469	\$30,834	\$43,533	\$28,417	\$20,154	63.5%
Roads and Related	\$24,887	\$20,570	\$10,318	\$14,568	\$9,510	\$6,744	21.2%
Water	\$3,867	\$3,196	\$1,603	\$2,263	\$1,478	\$1,048	3.3%
Sanitary Sewer	\$9,514	\$7,864	\$3,945	\$5,569	\$3,636	\$2,578	8.1%
Storm Water Management	\$4,534	\$3,748	\$1,880	\$2,654	\$1,733	\$1,229	3.9%
Subtotal Engineered Services	\$42,802	\$35,378	\$17,746	\$25,054	\$16,357	\$11,599	36.5%
TOTAL CHARGE PER UNIT	\$117,169	\$96,847	\$48,580	\$68,587	\$44,774	\$31,753	100.0%

Figure 14 Toronto development charge rate (Source: City of Toronto, 2024)

As shown in the figures, the development charge rates in Pickering are substantially lower than those in Toronto. For instance, in the Singles & Semis category, it costs \$117,169 per unit in Toronto, compared to only \$17,599 per unit in Pickering. This makes development charges in Toronto approximately 6.6 times higher than in Pickering.

It is important to note that this significant difference in development charges is not universal across all suburban municipalities. More developed and populated suburban areas such as Markham and Vaughan have similar, if not higher, development charges compared to Toronto (City of Markham, 2024; City of Vaughan, 2024). Pickering serves as a comparative example because, despite bordering Toronto, it has not experienced as much development or population growth as cities like Markham or Vaughan.

The lower development charges in less developed suburban municipalities make them more attractive to companies seeking to minimize expenditures and gain a competitive advantage. Consequently, suburbs like Pickering are often preferred over larger cities like Toronto for new developments.

Internalized Globalization

Another factor contributing to the outward migration from the inner city of Toronto to suburban municipalities is “internalized globalization” (Keil & Addie, 2016). This concept describes how Toronto is expanding its connectivity to the broader region through enhanced infrastructure networks and the embrace of internationalization. These efforts aim to foster a more robust governance framework across various scales (Belina & Lehrer, 2016), coupled with capital accumulation and local boosterism, which drive the growth of suburban areas and attract companies to relocate outward (Ekers et al., 2012, pp. 414).

As suburban municipalities in the Toronto region integrate more deeply into the global economy and enhance their infrastructures, internalized globalization emerges as a defining reality. This concept illustrates how developing suburban centres contribute to the region's polycentric nature. A crucial element of this phenomenon is inter-municipal competition, which encourages cities to centralize key economic activities like financial services, transportation infrastructure, and communication technologies within globally networked circuits (Belina & Lehrer, 2016, pp. 87). This concentration of economic activity is apparent in peripheral cities such as Markham, which hosts over 400 corporate headquarters and nearly 900 high-tech and life science companies (pp. 88). These suburban locales not only attract high skilled immigrants but also integrate seamlessly into the global market. Their proximity to Toronto, coupled with competitive advantages such as lower tax rates enhance their appeal, making them attractive destinations for corporations seeking cost-effective alternatives while maintaining access to Toronto (Ekers et al., 2012; Belina & Lehrer, 2016).

Investment from developers and companies has spurred the growth of employment centres across various scales outside Toronto, diminishing the city centre's role as the sole economic driver (Belina & Lehrer, 2016; Keil & Addie, 2016; Duquet & Brunelle, 2020). With these attractive conditions, suburban municipalities are not just supporting populations but are competing globally alongside Toronto. Connectivity among these suburban centres is vital for integrating the wider region into a cohesive economic environment (Keil & Addie, 2016, pp. 103).

Over the last two decades, significant demographic transformations marked by a substantial influx of immigrants, have fueled rapid growth and population expansion in these areas (Keil & Addie, 2016, pp. 106; Belina & Lehrer, 2016, pp. 88; Markham.ca; Statcan.ca). Through the lens of internalized globalization, the Toronto region can be seen as polycentric where economic

activities are decentralized and distributed across various suburban centres, reflecting a dynamic and interconnected urban network.

Relationship between Neoliberalism and Progression in a polycentric context

To reiterate the key ideas discussed by scholars, the expansion of the Toronto region can largely be attributed to the adoption of neoliberal policies. The phenomenon of suburbanization in this region is a direct result of the drive for neoliberal capital accumulation (Ekers et al., 2012, pp. 414). Neoliberalism is intrinsically linked to the relentless pursuit of capital accumulation by limiting the role of the state in economic regulation (Venugopal, 2015, pp. 172; Manning, 2024). This drive to generate more capital (MacDermid, 2009; Ekers et al., 2012, pp. 413-414; Cox, 2010, pp. 217) has led to significant investments in the suburbs as people expand outward from the inner city.

Neoliberalism is often criticized for its focus on deregulation and prioritization of profit over social well-being (Ekers et al., 2012; Peck, 2011, pp. 885). While this criticism is valid and observable in many instances, it does not capture the full scope of neoliberalism. In the Toronto region and beyond, municipalities reflect neoliberal influences through their urban skylines, characterized by skyscrapers, upscale residential areas, and expanding industrial and business districts.

As Castells noted in 1996, successful city regions in globalized interurban competition concentrate key economic activities—such as finance, transportation, and communication—within networked global circuits (Belina & Lehrer, 2016, pp. 87). This concentration is evident in the Toronto region, where neoliberal policies have driven significant investments and development, shaping the city's economic landscape.

The pursuit of capital has led to substantial growth in suburban areas, as businesses and residents seek more affordable and strategically advantageous locations. This dynamic interplay between capital accumulation and urban development underscores the multifaceted nature of neoliberalism and its profound impact on the Toronto region's expansion and transformation.

Deregulation and Pluralism in Polycentricity

Government deregulation under neoliberalism can be illustrated through AbdulMaliq Simone's concept of adaptable pluralistic approaches. In his article "Urbanity and Generic Blackness," Simone emphasized the relationship between pluralistic approaches and market-oriented movements using Tambora market as a case study. In this context, official regulations and informal practices coexist, with the real economic activity happening outside the formal market space, which remains largely vacant and generates minimal revenue (Simone, 2016, pp. 11). The true economic vitality occurs elsewhere, where informal market activities thrive, demonstrative adaptability and responsiveness to local needs even though they operate outside official regulatory frameworks (Simone, 2016, pp. 14).

This dynamic reflects a market-oriented movement where informal economic activities flourish due to their ability to adapt and respond to local demands. The resulting polycentricity is not formally planned but emerges organically from the interactions and negotiations among various market actors. The market operates as a complex network of traders, truckers, customers, security guards, cleaners, brokers, local authorities, and unofficial regulators, showcasing a decentralized and pluralistic approach to market dynamics (Simone, 2016, pp. 14).

Multiple centres of economic activity exist and thrive independently of central authority, fostering a polycentric urban structure. This informal polycentricity, which favors less top-down

control, suggests that incorporating market dynamics could potentially foster a pluralistic approach, emphasizing the organic emergence of multiple centres of activity and interaction.

Neoliberal Toronto region toward polycentricity

While the pursuit of capital accumulation can exacerbate socio-economic inequalities, it also plays a significant role in shaping urban and suburban landscapes (Ekers et al., 2012, pp. 413).

Investments in peripheral suburbs restructure economic activities across the region, fostering growth and development in these areas. By decentralizing economic activities into peripheral cities, opportunities for growth are created for all suburbs in the region.

In the Toronto region, the drive for capital has pushed the development to the city's outskirts, incentivizing the growth of previously underdeveloped suburban lands (Ekers et al., 2012). This shift has led to the emergence of multiple suburban cities capable of competing on a global scale (Belina & Lehrer, 2016). As these cities attract corporate migration from the inner city, connectivity and regional unity are enhanced, which is crucial for competing for limited resources from federal and provincial governments (Keil & Addie, 2016, pp. 111).

Keil and Ucoglu's article (2022) discusses the phenomenon of the suburban financial nexus, a new economic growth model that has become ingrained in Canada's economic mindset since the 1990s. This shift occurred as the economy transitioned from industrial manufacturing to the real estate, construction industries, and service sectors, particularly financial and technical (Keil & Ucoglu, 2022, pp. 107). By 2019, Ontario's GDP was \$744.44 billion, with real estate contributing 13.0% and construction 6.78% (Keil & Ucoglu, 2022, pp. 107-108). Therefore, the development of real estate and construction can be considered the primary engines of economic growth in Ontario, especially in the Toronto region.

The growth in these municipalities has fostered a competitive region (Belina & Lehrer, 2016). The networks formed among municipalities have become essential for achieving unity in a region often seen as fragmented, which can impede regional coordination and resilience (Keil & Addie, 2016, pp. 111). Neoliberal ideologies and initiatives aimed at capital accumulation have, arguably, created more allies for Toronto. These allies, while competing, also strengthens each other through polycentric regional coordination, enhancing their collective resilience in global competition.

In their pursuit to outshine rivals and attract investments, cities are driven to innovate and progress. This competition fosters a virtuous cycle, prompting cities to continuously improve urban governance, economic prosperity, and quality of life. This argument aims to provide a balanced view rather than an endorsement of capital accumulation and neoliberal ideologies. While neoliberalism has many drawbacks (Peck, 2011; Ekers et al., 2012; Cox, 2010), it also offers benefits. Neoliberal ideologies and the pursuit of capital accumulation have driven the development of peripheral centres, creating polycentric synergies in the Toronto region that enhance regional coordination and resilience on a broader scale.

However, neoliberal policies and the pursuit of capital accumulation are a double-edged sword. The success of this approach depends heavily on implementation and governance. Poorly managed, the capitalist pursuit can exacerbate inequalities, promote unsustainable development, and undermine social cohesion. But when managed well, it can drive significant growth and development.

Conclusion

In conclusion, reorganizing the socio-economic landscape of an urban region towards a polycentric environment offers numerous benefits. These include enhanced regional cohesion, increased economic efficiency, incentives for infrastructure development that extend beyond the urban core, and a reduction in socio-economic polarization. In the context of the Toronto region, it is evident that the area is gradually evolving into an urban region characterized by polycentric synergies among its municipalities. This transformation not only improves connectivity and resilience but also promotes more balanced and equitable regional development.

Furthermore, neoliberalism, with its emphasis on market orientation and minimal government interference (Joy & Vogel, 2015, pp. 36; Ekers et al., 2012), has driven substantial investments in infrastructure, housing, and commercial projects in the Toronto suburbs. Motivated by profit potential, these peripheral cities have experienced rapid growth and new economic opportunities, transforming them into vibrant hubs that both compete with and complement Toronto. However, urban regions must exercise caution when adopting neoliberal policies, as they can exacerbate issues such as inequality, unsustainable development, and displacement. If market-driven growth is left unchecked, these problems are likely to intensify.

While the risks of exacerbating urban social issues are acknowledged, current literature highlights the significant benefits of neoliberalism and capital accumulation in driving regional growth. These principles have played a crucial role in the substantial development of the Toronto region, fostering a network of interconnected polycentric centres. However, to fully comprehend

and manage the complexities of these dynamics, further research and careful consideration are imperative.

Adopting a pluralistic approach to growth and governance is essential. A polycentric region presents opportunities to dismantle entrenched centralized hierarchies, fostering a more democratic, socially equitable, and environmentally sustainable urban landscape. By transitioning from top-down hierarchies to a poly-nucleated urban structure, we can achieve these goals while promoting growth beyond a singular centralized core. This shift not only facilitates more balanced development but also encourages a more inclusive and resilient urban framework that meets the diverse needs of its inhabitants.

Redefining Urban Living: 15-Minute City Concept in Toronto region

Abstract

The 15-minute city (15mC), an urban planning concept popularized by Carlos Moreno in 2016, has been gaining global recognition. This concept addresses chronic urban issues, such as reducing automobile dependency by improving public transportation and investing in walkable/biking infrastructures, integrating mixed-use developments, and enhancing the efficiency of urban growth. My research focuses on Moreno's 15mC influence on the spatial form of the Toronto region and explores how the concept can promote the development of a more polycentric urban region. This chapter examines the feasibility of the 15mC concept in the Toronto region through literature reviews and case studies from scholars who have researched the socio-economic dynamics and spatial form of the region, as well as government policies relevant to adopting more mixed-use communities. By utilizing literature review and case study analysis, I argue that the 15mC can effectively reorganize the micro-scale of urban regions and address suburbanization by restructuring everyday life. This approach aims to dismantle the centralized hierarchy of urban living, transforming it into neighbourhood-scaled forms that are more democratic, socially equitable, and sustainable.

Introduction and Literature Review

The introduction of the 15mC concept by Carlos Moreno has revolutionized the world of urbanism. Moreno, a Franco-Columbian researcher and professor at IAE Paris-Sorbonne University, developed this concept in response to the deeply rooted car dependency that exacerbates social and economic inequalities, contributing to an unsustainable urban lifestyle (Moreno, et al., 2021, pp. 94; Moreno, 2024). In 2015, during the Paris United Nations Climate

Change Conference (COP21), Moreno coined the term “15-Minute City” or “Ville du quart d’heure.” He later became the key scientific advisor to Anne Hidalgo, the mayor of Paris, in her re-election campaign, where the 15mC was a central component (Willsher, 2020; Hernandez-Morales, 2022; Gongadze & Maassen, 2023; Tomorrow City, 2020).

The 15mC concept envisions urban environments where all residents have access to essential infrastructure, amenities, and daily needs within a 15-minute walk or bike ride from home (Moreno et al., 2021, pp. 100). This model aims to enhance social welfare by enabling residents to lead healthier lifestyles, saving time otherwise lost in traffic (pp. 100). Moreno and his colleagues outline six criteria necessary for residents to enjoy a higher quality of life: living, working, commerce, healthcare, education, and entertainment (Moreno et al., 2021, pp. 100).

The 15mC is not the only concept of its kind. Various similar models have been proposed both before and after Moreno’s introduction.

In 2013, D’Acci introduced the concept of the one-mile city, which explores the idea that classical urban economics theory centres around a Central Business District (CBD), where urban amenities and land values decreased with distance from the CBD (D’Acci, 2013, pp. 3). D’Acci argued that a multicentred city would create a richer spatial distribution of amenities and, consequently, a higher and more equitable quality of life (pp. 3). His paper focuses on the concept of Isobenefit Urbanism, envisioning the city as a homogenous spatial equilibrium where there are no advantages to changing locations (D’Acci, 2013, pp. 5). The Isobenefit city is based on a utopian idea where every point in the city has similar access to job locations, amenities, centralities, and an equal level of urban pleasantness. D’Acci emphasized that many urban issues, such as traffic, parking, pollution, lack of pedestrian-friendly spaces, and green areas, stem from commuting needs (pp. 6). His Isobenefit Urbanism aims to create cities where

residents can lead their lives by walking or biking within a one-mile radius (Politecnico di Torino, 2023).

More recently, Weng and her colleagues have made a case by proposing 15-minute walkable neighbourhoods in 2018 that concentrates on the aspect of non-communicable diseases (Diseases that are not transmissible directly from one person to another – heart disease, cancer, chronic respiratory disease, and diabetes) and obesity in Shanghai (Weng et al., 2019, pp. 259). The paper focused on promoting the connection between a healthy lifestyle and walkable neighbourhoods, while also emphasizing that the Shanghai government has been actively involved in the promotion of 15-minute walkable neighbourhoods, such as building walkable and healthy communities through pedestrian-friendly street designs that are compact and accessible, providing full coverage service in designated 15-minute neighbourhoods, and focusing on affordable housing (Weng et al., 2019, pp. 271).

To focus on the case of Shanghai further, it is the most rapidly urbanized and developed megacity in China (Weng et al., 2019, pp. 261). Over the past 40 years since the Chinese economic reform, the city has undergone a dramatic socio-economic shift (Li et al., 2018; Wu, 2018). As a result of development, growth, and improvement of lifestyle for their citizens, there have been increasing incidences of non-communicable diseases, particularly, obesity over the past decade (pp. 261). As a response to the health risks associated with obesity in the general population, the local government advocated 15-minute walkable neighbourhoods that share similar ideas to Moreno's 15mC concept. It aims to provide basic public services such as education, medical care, and commercial services within a walkable distance within 15 minutes in each community (pp. 261). The approach enables the creation of communities with amenities that are self-sufficient (Moreno, 2024). From a governance perspective, Shanghai's local

government is actively decentralizing administrative and fiscal responsibilities while implementing policies to enforce economic restructuring (Wu, 2018, pp. 118). These measures enhance the city's ability to develop self-sufficient communities within the framework of their policies.

Amenities for 15-min walkable neighborhoods measurement of entire population (a), children (b), adults(c), and seniors (d).

(a)

Principle category	Sub-category	Third level
Education	School	Kindergarten Primary school Middle school
	Training institution	
Medical care	Hospital	Hospital Neighborhood health center
	Pharmacy	
Municipal administration	Public transport site	Metro entrance (0.75), Bus stop (0.75)
	Park and square	
	Sports venue	Neighborhood fitness court Indoor stadium
	Cultural venue	Library, Art museum, Art gallery, Cultural center Neighborhood cultural activity center
Finance and telecommunication	Finance	Bank, ATM
	Post office	
Commercial service	Restaurant	
	Shopping	Fresh market Small and medium-sized store (Convenience store (0.65), Fruit store (0.65)) Large store (Supermarket (0.5), Department store (0.3))
	Entertainment venue	Beauty salon (0.05), KTV (0.05), Cinema (0.08), Gym (0.08), SPA (0.07), Amusement Park (0.05), Children's park (0.05), Café (0.07)
Elderly care	Geracomium (Nursing home)	Geracomium (0.2), Apartment for seniors (0.2)
	Elderly education	School for older adults

Figure 8 Principal Categories of Shanghai's 15mC (Source: Weng et al., 2019)

As shown in the chart above, Shanghai's 15mC have categorized the amenities that will be needed in their neighbourhoods and have met Moreno's criteria for a self-sufficient neighbourhood.

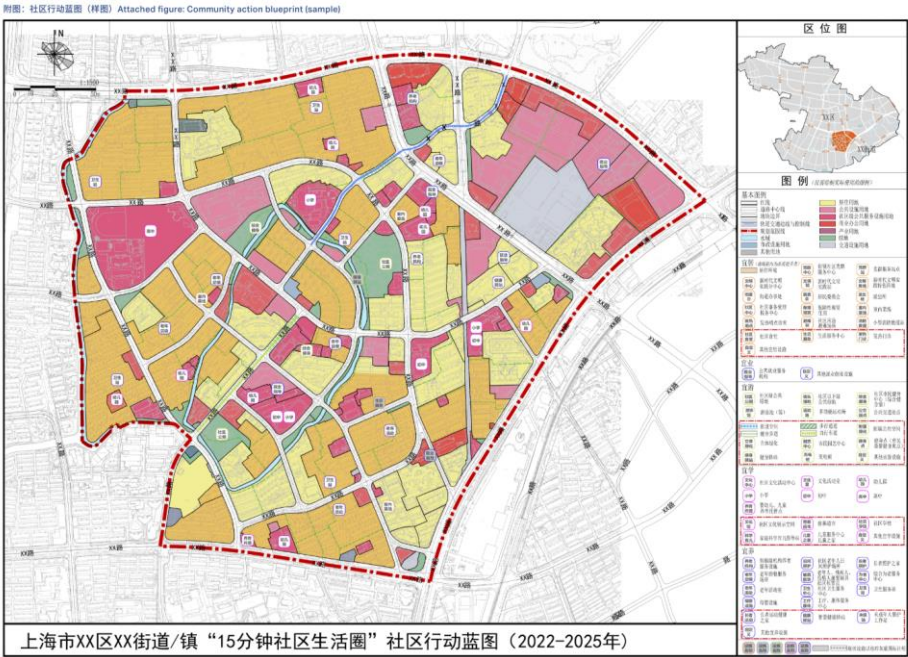


Figure 9 Sample 15mC Community of Shanghai (Source: Shanghai Municipal Bureau of Planning and Natural Resources, 2023, pp. 28)



Figure 10 Translated Legend of Shanghai Sample 15mC (Source: Elliot Li; Shanghai Municipal Bureau of Planning and Natural Resources, 2023)

In the two Figures above, the site plan is obtained from the Shanghai Government document that showcases a sample 15mC community. The placement of the amenities and infrastructure all aligns with Moreno’s six criteria for what can be considered self-sufficient while also conforming to Weng et al.’s principles of 15mC.

Other examples of mixed-use community planning concepts include the 20-Minute Cities proposed by Da Silva and her colleagues, who used Tempe, Arizona, as their case study (Da Silva et al., 2019). According to Da Silva et al., a 20-Minute City is defined as a city where residents can access essential activities for a good quality of life within 20 minutes by walking, biking, or taking public transit from their homes (Da Silva et al., 2019, pp. 2). In their case study, Da Silva and her team found that Tempe is particularly accessible by bike (pp. 19) and that the city has been promoting more sustainable modes of transportation and reducing car usage (pp. 2). This variation of the 20-Minute concept evolved from Portland's 20-Minute Neighbourhood concept, which envisions neighbourhoods where residents can access daily activities within 20 minutes by walking, biking, public transportation, or even by car (McNeil, 2011).

All these concepts are variations of what is understood as the novel perspective of chrono-urbanism (Moreno et al., 2021, pp. 100), which considers that the quality of urban life is inversely proportional to the amount of time spent on transportation. An article by Mulíček and colleagues examines the foundations of chrono-urbanism through the relationship between time and space. They argue that urbanization has radically transformed the time-space organization of our society (Mulíček et al., 2014, pp. 306) and that time is structured by activities rather than abstract units such as minutes and hours. They suggest that the city is an open time-space system of social relationships composed of activities not conducted by a single individual, indicating the city's role as a space characterized by a plurality of places and times and the potential to unify such time spaces (Mulíček et al., 2014, pp. 308). The relationship between time and space forms the foundation for concepts stemming from the perspective of chrono-urbanism.

To summarize, although these concepts of chrono-urbanism are based on different case studies, they share an overarching theme: reducing automobile dependency in urban regions and

promoting more sustainable and accessible modes of transportation. It is not a coincidence that these scholars advocate for moving away from automobiles. Society has become too reliant on cars, and our urban spatial form has evolved to accommodate this mode of movement, neglecting other forms of transportation and creating a cycle that reinforces automobile use. These scholars use their research to highlight the necessity of repairing urban and social fragmentation caused by modernist approaches (Moreno et al., 2021, pp. 100) and to propose frameworks that support urban residents in achieving a higher quality of life.

Moving back to Moreno's 15mC concept and the topic of polycentricity in urban regions requires an analysis of the relationship between these two concepts. As D'Acci briefly discusses in his article, unlike a monocentric city with a single hierarchy of centrality, polycentricity allows for multiple centres where each compensates for the other's absence, providing equal urban quality, services, and infrastructure (D'Acci, 2013, pp. 7). The 15mC concept suggests that infrastructures, services, and daily necessities can be accessed within 15 minutes by walking or biking (Moreno et al., 2021). This implies a concentration of these entities within close proximity to specific locations, creating multiple centres of activity. Applying this logic, if the 15mC were widely implemented across the Toronto region, it could result in a polycentric Toronto without a singular central hierarchy.

The successful realization of the 15mC is closely tied to existing land use policies and stakeholder commitment. Transforming an expansive urban area with preexisting infrastructure and residential communities into a polycentric form poses significant challenges. Additionally, a rapid shift from current planning approaches to the 15mC concept could exacerbate socio-economic inequalities. For instance, an influx of businesses into a pre-existing neighbourhood

could lead to displacement as the area becomes more desirable to wealthier residents, potentially resulting in gentrification (Cole et al., 2021, pp. 158).

Difficulties in implementation and policy barriers do not necessarily mean that the 15mC cannot be applied in the Toronto region to achieve polycentricity. Another perspective is to consider the matter of scale. While the 15mC concept is often focused on the neighbourhood level (Moreno et al., 2021; Moreno, 2024; de Leániz & Lobo, 2023), preexisting centres around the Toronto region already have concentrated infrastructures and amenities. By fostering the development and intensification of these centres, the region could take the first step towards creating a polycentric area in line with the chrono-urbanistic 15mC concept, leveraging existing mixed-use developments.

The objective of this paper is to assess the feasibility and viability of the 15mC concept in the Toronto region. The paper begins with a retrospective analysis of the rise of the 15mC concept, focusing on the societal and historical aspects of suburbanization and automobile dominance in North American case studies like Toronto region. It evaluates the strengths and weaknesses of the 15mC concept and explores the rationale for its adoption in the region. Additionally, the paper examines how the 15mC can break down the singular hierarchy of centrality, promoting a polycentric region, thus aligning with the broader portfolio objective.

Suburbanization, Car-Dependency, and Rise of 15mC Concept

Many scholars who have researched similar concepts to the 15mC have identified a common issue in urban areas, the population's over-reliance on automobiles (Moreno et al., 2021; Weng et

al., 2019; D'Acci, 2013; Da Silva et al., 2019; McNeil, 2013). Automobile dependency have shaped the social and spatial constructs of our environment, exacerbating social and economic disparities (Moreno et al., 2021; Moreno, 2024). This issue is particularly evident in North America, including the Toronto region. However, automobile dependence should be seen as a consequence rather than the cause of these problems. The root issue lies in the influence on urban spatial forms, particularly suburbanization in the Toronto region.

In my other paper focused on polycentricity in the Toronto region, I discussed that since the 1950s, Toronto has experienced significant population growth due to post-war baby boom and rising immigration leading to the expansion of suburban areas. As a result, extensive infrastructure networks such as highways multiplied. This plays a crucial role in shaping the Toronto region's spatial form, and connected to the later arguments that the historical development of the Toronto region has contributed to the automobile-centric urban form we see today.

In addition, residents are not deliberately choosing automobiles as their primary mode of travel within and outside urban areas, often cars are the only efficient option for reaching daily necessities (Zhang, 2006, pp. 311). Using the Toronto region as an example, although the City of Toronto has an extensive public transportation system, such as the TTC bus and subway lines, and suburban municipalities have their respective systems. On the regional scale, the GO Train connects municipalities. However, this does not imply extensive connectivity, especially in the suburbs where transit deserts lack public transit stations.

For instance, Durham Region, the largest regional municipality in the Greater Toronto Area, covers approximately 2,500 km² but has only four GO Train stations located in Pickering, Ajax, Whitby, and Oshawa (Metrolinx). These stations are near Lake Ontario along Kingston Road.

Residents living north of Kingston Road, which is the majority, would find it more convenient to drive directly to their destinations than to drive to a GO Train station.



Figure 11 Durham Region GO Train Station (Source: Gotrainsit.com)

The growing prominence of 15mC concepts in urban areas directly challenges the automobile-centric planning that shaped the Toronto region. A report by the Federal Task Force for Housing & Climate, co-chaired by former Edmonton mayor Don Iveson, former federal transport minister Lisa Raitt, economist Mike Moffatt, former Bank of Canada governor Mark Carney, and other experts, aim to help Canada build 5.8 million additional homes by 2030 (Bozikovic, 2024). A key insight from the report is that building affordable, low-carbon, and resilient homes depends significantly on their location. Constructing homes “inside existing communities” is cheaper, faster, and less carbon-intensive (Bozikovic, 2024). The report suggests that to achieve this, urban areas must stop expanding outward and embrace the 15mC concept as the future of Canada.

Iveson advocates for infill development, which is building within existing neighbourhoods and utilizing current infrastructure and aligning with mass transit (Bozikovic, 2024). He argues that this approach is cost-effective both in the short and long term and enhances the fiscal efficiency of cities. Building within existing neighbourhoods reduces emissions, as residents are likely live in smaller homes and drive shorter distances or not at all (Bozikovic, 2024).

A core component of the 15mC concept is its promotion of a pedestrian-friendly environment that increases urban walkability (Moreno et al., 2021, pp. 100; Moreno, 2024). This does not mean completely abandoning cars in favour of walking or biking but rather creating an environment where residents can choose how they want to travel. This flexibility aims to reduce necessity of driving due to a lack of alternatives.

15mC Conspiracy

As more governments globally begin to integrate the 15mC concept into their planning (Büttner et al., 2024), reactions have been mixed, often with skepticism about the true intent of the urban reform. Critics argue that the 15mC model could inadvertently become a tool for governmental control (Wainwright, 2023; Georgieva, 2023), confining residents within their neighbourhood and limiting their mobility across the broader urban landscape. This has fueled fears of potential digital surveillance and enforced mobility restrictions. Under this narrative, residents might be required to carry digital identification and stay in their designated 15-minute radius, facing penalties for crossing boundaries (Georgieva, 2023).

These concerns tie into the broader conspiracy theory known as the Great Reset (Wecke, 2021; Georgieva, 2023), which propose that the global elites plan to establish a communist world order by abolishing private property, using COVID-19 to address overpopulation, and controlling humanity with vaccines. Such conspiracies have exacerbated concerns about government overreach.

In Canada, awareness of the 15mC concept varies. While most Canadians are unfamiliar with it, awareness is highest in Alberta at 41%, partly due to Edmonton's discussions about potential implementation (Canseco, 2023). Edmonton's district policy and 15 district plans aim to guide

future dense housing and commercial building development (Boothby, 2024). However, some residents have heavily opposed these plans, fearing they will restrict movement (Boothby, 2024). Support for the concept is higher among Canadians aged 18-34 (66%) compared to those aged 35-54 (51%) (Canseco, 2023).

Opposition to 15mC concepts in municipal planning has made implementation challenging. As Lorinc noted, the term 15mC has become a “poisoned chalice” in policy documents (Lorinc, 2023). Not all attendants that local planning meetings are extreme, some are simply influenced by social media misinformation. However, the conspiracy-driven aggression often seeks as scapegoat rather than addressing misinformation through communication (Lorinc, 2023).

The conspiracy theory opposing the expansion of 15mC concept originated in the UK as a reaction to traffic restrictions implemented in Oxford (Georgieva, 2023; Jackson, 2023). These restrictions require drivers to have special permits to travel along six busy roads during daytime hours with traffic cameras enforcing compliance and issuing fines to violators. The measures sparked widespread protests, with motorists claiming they infringed on their freedom.

Coincidentally, the Oxford city council was actively endorsing planning documents based on the 15mC concept (Georgieva, 2023; Jackson, 2023). Conspiracy theorists suggested that the traffic measures were part of a broader agenda to confine residents to their communities, viewing the 15mC as a dystopian nightmare rather than a benign urban planning principle (Wainwright, 2023). This narrative was further amplified by a tweet from Jordan Peterson, who claimed that bureaucrats deciding where people are “allowed” to drive was a perversion of urban planning and part of a “well-documented plan” (Peterson, 2022). Such statements have fueled public distrust and skepticism, hindering constructive dialogue about future of urban development.

In response, Carlos Moreno, who introduced the concept, sought to debunk these conspiracies. He dismissed the government surveillance and control as “enormous lies,” emphasizing that the 15mC is rooted in principles of disincentivizing car ownership, freeing up urban space, and reducing fossil fuel consumption (Reid, 2023). Despite efforts to clarify the concept’s intentions, these conspiracies persist and misrepresent the 15mC, generating unwarranted anxieties about the future of urban living in an environment of mistrust and paranoia.

Automobile Dependency

Heavy reliance on automobiles as the primary mode of transportation in urban areas poses a significant threat to the quality of urban life. A major impact of the 15mC concept is on public health. At the individual level, automobile dependence fosters a sedentary lifestyle that contributes to chronic diseases such as obesity, diabetes, and heart disease (Zhang, 2006, pp. 311; Frank & Engelke, 2001, pp. 203; Weng et al., 2019, pp. 259; Ulloa-Leon et al., 2022). Driving requires minimal physical activity, and over time, this lack of exercise from walking and other forms of physical activity increases the risk of various health issues.

Walkable neighbourhoods are considered more equitable, sustainable, and economically vibrant compared to disconnected, automobile-dependent land use patterns typical of suburban developments (Knight et al., 2019, pp. 1; Speck, 2012). Numerous studies have explored the relationship between walkable neighbourhoods and social inequalities, particularly among lower-income, less educated, and minority populations (Weng et al., 2019, pp. 261; Knight et al., 2018, pp. 2).

For instance, descriptive statistics from Knight et al., (2018) highlight disparities in walkability for different races and income levels in Buffalo, NY, using Walkscore data, revealing significant differences in access. The figure below illustrates this disparity.

Descriptive statistics for vehicle access-WalkScore® clusters types.

Cluster type	High Vehicle Access, High Walkability		Poor Vehicle Access, High Walkability		High Vehicle Access, Low Walkability		Poor Vehicle Access, Low Walkability ^a		Total ^b bl2inf
	%	LQ	%	LQ	%	LQ	%	LQ	%
Asian	5.80	1.23	9.71	2.06	0.21	0.05	4.14	0.88	4.70
Black	12.02	0.33	22.05	0.60	29.41	0.80	61.65	1.68	36.60
Hispanic	8.62	0.80	30.46	2.81	9.49	0.88	6.93	0.64	10.83
White	69.57	1.56	33.04	0.74	57.59	1.29	25.49	0.57	44.72
Below poverty level ^c	21.22	0.68	45.23	1.45	23.16	0.74	40.02	1.28	31.22
Housing units vacant	17.47	1.07	15.16	0.93	17.01	1.05	23.70	1.46	16.27
Housing units owner-occupied	35.77	0.86	24.64	0.60	55.63	1.34	39.75	0.96	41.39
No vehicle available ^d	16.63	0.58	42.83	1.49	17.74	0.62	40.71	1.42	28.73
Unemployed ^b bl2inf	5.40	0.55	8.57	0.87	11.67	1.19	16.26	1.66	9.81
Mean assessed value ^e	161,211		60,542		46,176		31,583		72,595
% Change in mean assessed value ^f	+0.65		+4.46		+0.59		+2.12		+0.18
Population (% of total)	7.69		10.07		3.29		5.12		255,807
No. of block groups	22		29		9		17		284

^a Clusters of limited mobility.
^b For individuals for whom poverty status is determined.
^c For occupied housing units.
^d For civilian labor force 16 years and over.
^e For single-family residential properties, 2016.
^f For single-family residential properties, 2010-2016.
^g Note: Total includes the "Not Significant" category from Fig. 4, which is omitted here for efficiency.

Figure 12 Descriptive statistics for vehicle access by Walkscore (Source: Knight et al., 2018)

In Buffalo, 69.57% of the White population live in areas with both high vehicle access and walkability. In contrast, only 5.80% of Asian, 8.62% of Hispanic, and 12.02% of Black communities enjoy the same conditions. Notably, 61.65% of the Black community lives in areas with poor vehicle access and low walkability. These disparities make it difficult for disadvantaged groups to access essential services such as commercial, educational, recreational, or medical facilities (Weng et al., 2019, pp. 261).

The 15mC concept aims to reduce socio-economic disparities in urban environments by creating more compact living arrangements (Moreno et al., 2021; Moreno, 2024), where essential amenities are within a walking distance. According to the research by Driving Urban Transitions (Büttner et al., 2024), components of the 15mC including developing mixed-use neighbourhoods by converting office space into housing, promoting co-living to reduce housing cost, and

fostering decentralized service sectors with amenities like schools, commerce, medical centres, and entertainment (Büttner et al., 2024, pp. 20-21).

If implemented, the 15mC concept could overcome policy and governance barriers, leading to reorganized communities and streets that foster a more equitable environment. While nothing is guaranteed until fully executed, the theories behind the 15mC suggest it could create urban areas where marginalized communities without vehicular access benefit equally from urban living.

Commute and Pollution Reduction

Another strength of the 15mC concept is its potential to reduce commute distances and, consequently, pollution. In urban centres with a strong urban hierarchy, most commutes are from the suburbs to the inner city (Grunfelder et al., 2015, pp. 74). Automobile dependence (Zhang, 2006, pp. 311, 319) significantly influences these movement patterns. There is a direct relationship between commuting and congestion, which is associated with costs such as lost time, wasted fuel, lower productivity, and increased pollution from greenhouse gas emissions (Urban Transportation Task Force - UTTF, 2012, pp. 5). These social and external costs differ from direct costs like wasted fuel expenses. The Toronto region is not exception to congestion.

Transport Canada conducted a study to quantify the direct and social costs of congestion in Canadian urban centres, including Toronto (Urban Transportation Task Force - UTTF, 2012). The study used five measures to derive the economic, social, and environmental costs of congestion.

1. Duration of peak period (length of rush hour).
2. Percentage of work versus non-work trips.
3. Values of time for work and non-work purposes.
4. Unit fuel price.

5. Unit greenhouse gas mitigation costs.

The cost of congestion was calculated by estimating the additional time drivers took to complete their journey under three congestion thresholds: 50%, 60%, and 70% of free-flow speeds. For example, a 70% threshold considers movement at less than 70% of free-flow speeds as congestion; on a highway with a 100 km/h speed limit, traffic flow below 70 km/h is considered congested.

2002 Canadian dollars (millions)

Urban area (2001 population)	Year	Fifty percent threshold	Sixty percent threshold	Seventy percent Threshold	Annual cost per capita at 60 percent threshold
Toronto (4,682,897)	2001	889.6	1,267.3	1,631.7	271
Montréal (3,426,350)	1998	701.9	854.0	986.9	249
Vancouver (1,986,965)	2003	402.8	516.8	628.7	260
Ottawa-Gatineau (all) (1,063,664)	1995	39.6	61.5	88.6	58
Calgary (951,395)	2001	94.6	112.4	121.4	118
Edmonton (937,845)	2000	49.4	62.1	74.1	66
Québec City (682,757)	2001	37.5	52.3	68.4	77
Winnipeg (671,274)	1992	48.4	77.2	104.0	115
Hamilton (all) (662,401)	2001	6.6	11.3	16.9	17
Total		2,270.2	3,015.0	3,720.6	

Figure 13 Annual Cost of Congestion in Selected Canadian Cities (Source: Lindsey, 2008, pp. 244)

City	50% Congestion Threshold	60% Congestion Threshold	70% Congestion Threshold
Vancouver	\$518 M	\$652 M	\$755 M
Edmonton	\$85	\$103	\$120
Calgary	\$149	\$171	\$180
Winnipeg	\$73	\$100	\$125
Hamilton	\$13	\$24	\$37
Toronto	\$1,298	\$1,672	\$2,014
Ottawa- Gatineau	\$220	\$304	\$380
Montreal	\$697	\$811	\$910
Quebec	\$63	\$89	\$118
Total	\$3,116 M	\$3,927 M	\$4,640 M

Figure 14 Annual Cost of Congestion in Selected Canadian Cities (2006) (Source: Transport Canada)

The data presented in the figures above indicate that congestion cost Toronto \$1.6 billion in 2001 and \$2 billion in 2006. While these figures are over a decade old, the congestion issue in the Toronto region continues to worsen due to population growth, highlighting the substantial costs commuting and congestion add to urban areas.

The 15mC concept can help mitigate the prolific congestion in urban regions by reducing automobile dependency. Since jobs are commonly the primary reason for travel, people typically access the largest number of jobs by car (Da Silva et al., 2019, pp. 2). The 15mC concept emphasizes the need for proximity to basic amenities, services, and opportunities (Moreno et al., 2021, pp. 98; Da Silva et al., 2019).

If more communities are built with a mixed-use planning – integrating residential areas with amenities and office spaces, residents will no longer need to commute long distances for work. This can alleviate the stress on road infrastructure, reduce congestion, and consequently lower greenhouse gas emissions due to decreased driving.

The Duality of the 15mC

Despite its strengths, the 15mC concept also has its weaknesses. High-density mixed-use communities that embrace 15mC initiatives can indeed create a more equitable urban environment by reducing car dominance and increasing accessibility, with amenities and infrastructure located within walking/biking distance of about 15-minutes. While these changes are positive and can improve urban spaces, they also risk inducing gentrification (Cole et al., 2021).

Gentrification occurs when neighbourhood improvement attracts a more privileged population, changing the demographic, real-estate, and business characteristics of the area (Cole et al., 2021, pp. 158). This process often means that only wealthier individuals can afford the newly renovated, more expensive homes and can fully enjoy new cultural and consumption practices. While some argue that gentrification can reduce social, physical, and health inequalities through social mixing and improved access to resources and services, research by Musterd et al. indicates

that as gentrification matures, neighbourhoods become homogeneously affluent, leading to higher levels of segregation (Musterd et al., 2016, pp. 1074-1075).

Another criticism associated with the 15mC concept is its inherent ableism (Buliung, 2023), which centres on the assumption that residents can walk or bike to their destinations. Ableism refers to the societal privileging of certain physical ability while marginalizing those with disabilities. Buliung questions the inclusivity of communities designed around the ability to walk or bike, pointing out that this excludes those who cannot do so due to disabilities. For residents who use mobility devices, move at a slower pace, or require adapted public or school transportation, the 15mC concept may not be sensible (Buliung, 2023).

While the 15mC concept aims to reduce socio-economic segregation by fostering mixed-use communities, it also risks exacerbating segregation through gentrification. Additionally, it is not a universal solution to all societal issues. Planners and policymakers considering the 15mC concept must carefully weigh its benefits against the potential to worsen existing social issues, including ableism and gentrification.

Local Case Studies in the Toronto region

Differentiating Mixed-Use Developments and 15mCs

Currently, there are mixed use developments happening in the Toronto region, in cases such as the redevelopment of existing malls (City of Toronto, 2021). The redevelopments often encompass malls with large surface parking lots that will be eventually used as locations for new high-rise residential structures and new retail areas.

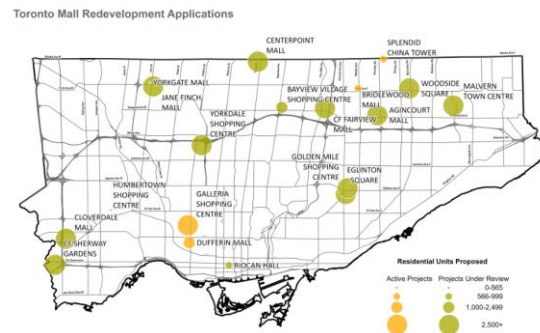


Figure 8 Toronto Mall Redevelopment Applications (2024) (Source: City of Toronto, 2023)

There are 20 malls in Toronto that are currently being planning for redevelopment (City of Toronto, 2023b) shown in the figure above. Mall developments are also happening in suburban municipalities like Markham for example, such as the Markville Mall redevelopment (Yan, 2023). This is a movement called New Urbanism (Perrott, 2020), which is a reaction to urban sprawl by promoting built environments that are pedestrian-scaled, supportive of mass transit, diverse land use, and accessible public realms (Perrott, 2020, pp. 391).

Although there are some resemblances between the mall redevelopment across the region and Moreno's 15mC concept, in particular, promoting built environments that is pedestrian scaled, it differs as the redevelopments are not self-sufficient while also emphasizing connectivity to other parts of the city. These redevelopments of new urbanism are dependent on the larger urban region to sustain themselves due to a proximity to mass transit centres, making them closer to the concept to transit-oriented communities (Perrott, 2020, pp. 391) rather than 15mC. According to Moreno and colleagues, the six criteria for 15mC that enables self-sufficiency are living, working, commerce, healthcare, education, and entertainment (Moreno et al., 2021, pp. 100; Moreno, 2024). Only communities that allows residents to fulfill the six criteria of living can be

considered a 15mC. Furthermore, the 15mC concept promotes urban densification by encouraging compact and well-connected neighbourhoods, reducing distances and avoiding sprawl (Moreno, 2024, pp. 46). This is in contrast to the mall redevelopments where a core guiding principle is to create internal connections and connections to transit (City of Toronto, 2021, pp. 2).

A distinction needs to be made between these mall redevelopment projects and actual 15mC projects as they share some similarities in the provision of infrastructure and amenities, but the core functionality of the two concepts is fundamentally different, which paves the way for the following two projects that are considered to be “real” 15mC projects happening in the Toronto region.

Downsview Framework

A notable local case study in the Toronto region is the transformation of Toronto’s Downsview Airport. Originally opened in 1929 by de Havilland Canada, Downsview served as an air force base and produced thousands of aircraft during the Second World War (Alter, 2022). In 2018, Bombardier Aerospace sold the location to Northcrest Development, which announced plans to convert the land into housing and workspace for 80,000 people, following the principles of the 15mC (Alter, 2022).

The design of this project is led by the Danish architecture firm Henning Larsen, Toronto-based KPMB Architects, and Copenhagen’s SLA as the landscape architects. This 520-acre parcel

(Alter, 2022) is situated in an already well-developed area with existing residents, subway stations, rail lines, and highways.



Figure 9 Current State of the Downsview Airport (Source: Northcrest Development, 2020)

The current state of Downsview is guided by the City of Toronto's Downsview Area Secondary Plan, which prioritizes economic development, transit-oriented development, housing affordability and sustainability, and community amenities (Urban Toronto, 2020).

According to Rasmus Astrup (2022), the design principal of SLA, he explained,

"In Downsview we introduce a whole new hierarchy for how to design our cities and our communities. By putting nature first, we create a new way of living in Toronto centered on biodiversity, climate resilience, local identity, and strong community. We call this design approach 'City Nature.' City Nature is a both/and approach to urbanism that weaves landscape and nature together with architecture. In Downsview, this approach is essential to creating a sense of place and individual identity to the vast site."

"The Runway will act as the site's primary pedestrian street and the spine of community life and social infrastructure...The Runway will be the focus of community life and a new regional destination for Toronto. The Runway will consist of the main 2.1 km north-south runway, as well

as 890 meter east-west taxiway. It will be a predominantly car-free, universally-accessible corridor that links parks, community facilities, and transit.”



Figure 10 Mixed-use rendering of the Runway by Henning Larsen/KPMP/SLA (Source: Alter, 2022)

The framework plan aims to serve as a new density model for Toronto, with a particular emphasis on balancing density, sustainability, and livability. The mobility strategy is based on three goals: creating complete, connected, and walkable communities; facilitating active transportation to local transit services; and leveraging regional transit connections to key employment and growth nodes (Alter, 2022; Urban Toronto, 2020; Northcrest, 2024; City of Toronto, 2017, pp. 3, 17).

This does not imply a complete absence of cars in the community. The roads are being designed under the framework of complete streets (Alter, 2022), which will safely accommodate all modes of movement. This means that cars will no longer dominate the public space on the road but will instead share it with other modes of transportation.

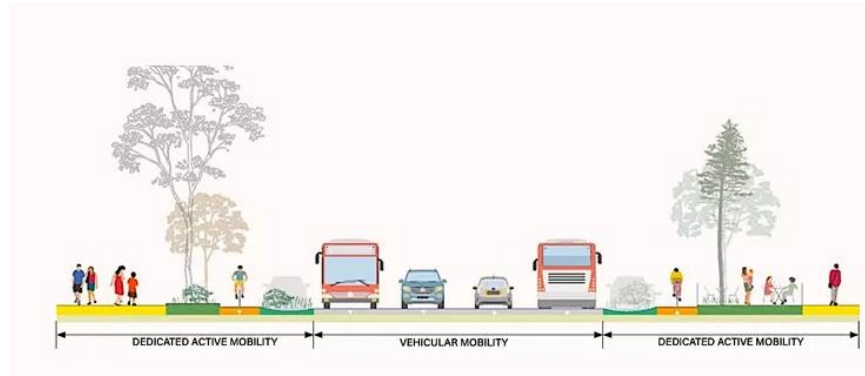


Figure 11 Complete Street Diagram by Henning Larsen/KPMP/SLA (Source: Alter, 2022)

This project is expected to take decades to complete. According to Northcrest's website, Phase 1 is scheduled for completion between 2024 and 2031, while Phase 2 will span from 2032 to 2051 (Northcrest, 2024).



Figure 12 Phases of Downview Development (Source: Northcrest, 2024)



Figure 13 Architectural Massing (Source: Alter, 2022; Henning Larsen/KPMB/SLA)

Michael Sorensen, who is the North America Henning Larsen design director notes,

“The city is an inevitable fact of the future. So, in order to ensure not just quality of life for future population, but also the conservation of nature, it is essential that relationship between city and nature is both/and, not either/or. Downsview is a commitment to that vision.”

The Downsview framework exemplifies the principles of the 15mC by prioritizing walkability, connectivity, and sustainability in an urban environment. The project ensures that daily necessities are easily accessible by walking or biking, and it emphasizes transit-oriented development, making it an excellent example of the 15mC concept in the Toronto region.

Brampton’s 20-Minute Walkable Neighbourhood

A project in the City of Brampton is on its path to becoming a 15mC neighbourhood. In a dialogue between Kaari Kitawi, a Senior Urban Designer for the City of Toronto, and Yvonne Yeung, who was then the Head of Urban Design for the City of Brampton, the plan emerged as an initiative Yeung started with the Urban Land Institute (OALA, 2024) prior to joining the City of Brampton. The focus was on creating walkable communities within urban growth centres, served by rapid transit. According to Yeung, the plan for Brampton was inspired by the Scandinavian model of creating family-oriented neighbourhoods that integrate nature and social hubs at the heart of communities (OALA, 2024). Helsinki, in particular, was chosen as an international benchmark for its success in shifting from car-centric to transit-oriented planning, creating walkable neighbourhoods that prioritize public health and environmental sustainability (OALA, 2024).

A local variation of 15mC can be seen in Brampton’s Queen Street East Precinct Plan. Known as The Precinct, this 220-acre area spans a 2 km stretch of Queen Street East, centred on Highway

410. This provincially designated urban growth centre is Brampton's primary corridor for intensification and is planned to become the heart of cultural, economic, and entertainment activities. Currently, this area is an auto-oriented suburban commercial strip with small-scale retail and commercial uses, including medical centres, faith centres, commercial plazas, and residential buildings (City of Brampton).



Figure 14 Queen Street East Precinct Plan 1 (Source: City of Brampton, 2019)

This plan encompasses over 2 km of the future Queen Street Bus Rapid Transit Route (City of Brampton, 2019), providing direct connections to the TTC subway at the Vaughan Metropolitan Centre and the Brampton GO station. Although The Precinct has not yet been realized, the City of Brampton envisions its development over a 30-year horizon, up to 2051, with the goal of accommodating the evolving lifestyles of young singles, families, and seniors.



Figure 15 Queen Street East Precinct Plan 2 (Source: City of Brampton, 2019)

The plan includes three new mixed-use districts designed to create vibrant communities for residents. Although the final product is not yet complete, with amenities and infrastructures currently speculative, the City of Brampton has outlined three districts focused on health, family, and business (City of Brampton, 2019). These districts are tailored to meet the population's needs, particularly seniors, by incorporating facilities that accommodate their requirements. The plan emphasizes accessibility to amenities that support healthy living for all family members and cater to intergenerational households by providing larger units, access to daycare, parks, and a mix of dynamic retail options (City of Brampton, 2019).

The business district is designed to support 24-hour social and economic activity, with amenities such as outdoor spaces, a potential convention centre, hotels, shops, restaurants, and landmark buildings (City of Brampton, 2019). Additionally, according to Yeung, the designers of Brampton aimed to avoid tall towers on two- or three-story podiums, which do not foster a neighbourhood environment conducive to community building (OALA, 2024). The urban designers emphasized the importance of the public realm during the development process to avoid creating vertical suburbs. Instead, the built form needs to create the right enclosure with the surrounding streets

and blocks, providing family-sized dwellings that ensure plenty of "eyes on the street" (OALA, 2024).



Figure 16 Queen Street East Precinct Plan 3 (Source: City of Brampton, 2019)

Furthermore, transit is a crucial backbone of the 15mC concept, and this has been a key consideration in the design of Brampton's plan. The preliminary plan for The Precinct considers four modes of travel. It highlights a comprehensive network of pedestrian pathways, ensuring residents can easily access key destinations on foot and promoting walkability with green, pedestrian-friendly environments that reduce reliance on cars for short trips. There is a clear emphasis on cycling, with dedicated bike lanes to ensure safe and efficient cycling. These lanes connect residential areas with commercial and recreational zones, encouraging active transportation.

The plan also provides necessary vehicular access, including rideshare options, ensuring that while the focus of the 15mC concept is on reducing car dependency (Moreno, 2024, 2021), driving remains a viable option when needed. Lastly, the integration of transit routes and stations indicates a strong commitment to public transportation, with direct airport access highlighting the plan's role in broader regional connectivity (City of Brampton, 2019).

Both this model and Moreno's 15mC aim to provide residents with access to most of their daily needs within a short distance, following Moreno's six criteria (Moreno et al., 2021, pp. 100) such as work, education, shopping, healthcare, and recreation. The focus on walking, cycling, and ensuring various modes of transportation cater to a diverse range of needs and preferences. Therefore, it is evident that Brampton's preliminary plans for The Precinct 20-Minute City (City of Brampton, 2019) embody the principles of the 15mC, with a strong emphasis on accessibility, sustainability, and quality of life.

Rationale for adopting 15mC concept in Toronto region

After thoroughly examining the factors that have shaped the spatial configuration of the Toronto region, including dispersed suburbanization driven by heavy reliance on automobiles and low density (Filion, 2018, pp. 122), the overarching question remains: How can adopting the 15mC concept effectively reorganize the micro-scale of the Toronto region and address the challenges of suburbanization?

This paper's examination of the 15mC concept reveals it as a model promoting a self-sufficient lifestyle (Moreno et al., 2021; Moreno, 2024). By consolidating essential amenities and services within a 15-minute walking distance, it reduces the need for extensive driving across the urban region. In contrast, the current situation in the Toronto region features suburbs with ever-expanding residential encroachment (Markham, 2014; City of Toronto, 2023). This phenomenon is partly due to the super-block pattern (Filion, 2018, pp. 130), an effort to protect suburban residential areas from high traffic volumes. This results in dispersed communities with limited access to amenities and increased dependency on automobiles for daily necessities (Filion, 2018, pp. 125).

Planning for 15mCs in the Toronto region can effectively reduce sprawl by promoting the development of mixed-use communities. As Moreno states, "*Proximity plays an essential role in lifestyle change and city transformation*" (Moreno, 2024, pp. 45). Developing more self-sufficient communities that implement the components of the 15mC can decentralize amenities and infrastructure across the urban landscape, breaking down the established centralized hierarchy.

This is not to say that the current Toronto region is anti-density or committed to suburban sprawl. There are existing policies and objectives that actively promote mixed land usage. For instance, the Ontario Growth Plan for the Golden Horseshoe explicitly states the need to combine residential areas and job opportunities within the same location (A Place to Grow Plan, 2020, pp. 17-19, 32). However, while these policies advocate for mixed land use, the reality often falls short of these ideals.

Current Barriers to 15mC in Toronto region

The lag in developing more mixed-use areas can be attributed to several factors. Firstly, the pursuit of capital accumulation (Ekers et al., 2012, pp. 413) plays a significant role. The decreasing supply of land resources in cities due to competition in real estate and infrastructure development (Woudsma, 2016, pp. 486) escalates the cost of urban development. Consequently, there is a push towards the outskirts, where land prices are relatively cheaper due to less competition. This is evidenced by the varying development charges across different municipalities. For example, as discussed in my paper on polycentrism, comparing development charges in Pickering and Toronto illustrates why developers are more inclined to invest in undeveloped suburban lands rather than inner-city areas.

City of Pickering - Seaton Lands Development Charges and Financial Impacts Agreement (FIA) Charges						
Development Charges (DC) By-law No. 7953/22 and FIA Article 5 for the period of July 12, 2023 - June 30, 2024. Reduced to 85% of maximum fee (Bill 23)						
DC By-law No. 7953/22	Per Residential Dwelling Unit by Type				Non-Residential Charges	
	Single and Semi-Detached Dwelling	Apartments - 2 bedrooms +	Apartments Bachelor and 1 Bedroom	Other Multiples	Non-Residential per ft ² of Total Floor Area ¹	(per net Ha of Prestige Employment Land in Seaton)
Other Services Related to a Highway	\$712	\$414	\$254	\$549	\$0.32	\$11,163
Fire Protection Services	1,123	653	401	865	0.51	17,652
Parks & Recreation Services	12,670	7,368	4,522	9,759	0.98	34,294
Library Services	2,333	1,356	832	1,797	0.18	6,394
Growth-Related Studies	224	131	80	173	0.03	1,034
Stormwater Management	439	256	157	338	0.20	6,905
By-law Enforcement Services	98	57	35	75	0.04	1,493
Transportation ²	0	0	0	0	0.00	0
Total DC By-law No. 7953/22	\$17,599	\$10,235	\$6,281	\$13,556	\$2.26	\$78,935

Figure 17 Pickering Development Charge Rate (Source: Pickering.ca)

CITY OF TORONTO RESIDENTIAL DEVELOPMENT CHARGES RATES - NON-RENTAL PER DWELLING UNIT OR DWELLING ROOM EFFECTIVE MAY 1, 2024							
Service	Residential Charge By Unit Type						Percentage of Charge
	Singles & Semis	Multiples 2+ Bedrooms	Multiples 1 Bedroom and Bach.	Apartments 2+ Bedrooms	Apartments 1 Bedroom and Bach.	Dwelling Room	
Spadina Subway Extension	\$3,726	\$3,080	\$1,545	\$2,181	\$1,424	\$1,010	3.2%
Transit (balance)	\$45,204	\$37,364	\$18,743	\$26,463	\$17,273	\$12,250	38.5%
Parks and Recreation	\$17,212	\$14,227	\$7,136	\$10,075	\$6,577	\$4,665	14.7%
Library	\$2,367	\$1,956	\$981	\$1,385	\$904	\$641	2.0%
Housing Services - Shelter	\$0	\$0	\$0	\$0	\$0	\$0	0.0%
Housing Services - Affordable Housing	\$0	\$0	\$0	\$0	\$0	\$0	0.0%
Police	\$656	\$542	\$272	\$384	\$251	\$178	0.8%
Fire	\$246	\$203	\$102	\$144	\$94	\$67	0.2%
Ambulance Services	\$902	\$746	\$374	\$528	\$345	\$244	0.8%
Development-Related Studies	\$176	\$145	\$73	\$103	\$67	\$48	0.2%
Long Term Care	\$2,039	\$1,685	\$845	\$1,193	\$779	\$553	1.7%
Child Care	\$1,019	\$843	\$423	\$597	\$390	\$276	0.9%
Waste Diversion	\$820	\$678	\$340	\$480	\$313	\$222	0.7%
Subtotal General Services	\$74,367	\$61,469	\$30,834	\$43,533	\$28,417	\$20,154	63.5%
Roads and Related	\$24,887	\$20,570	\$10,318	\$14,568	\$9,510	\$6,744	21.2%
Water	\$3,867	\$3,196	\$1,603	\$2,263	\$1,478	\$1,048	3.3%
Sanitary Sewer	\$9,514	\$7,864	\$3,945	\$5,569	\$3,636	\$2,578	8.1%
Storm Water Management	\$4,534	\$3,748	\$1,880	\$2,654	\$1,733	\$1,229	3.9%
Subtotal Engineered Services	\$42,802	\$35,378	\$17,746	\$25,054	\$16,357	\$11,599	36.5%
TOTAL CHARGE PER UNIT	\$117,169	\$96,847	\$48,580	\$68,587	\$44,774	\$31,753	100.0%

Figure 18 Toronto Development Charge Rate (Source: Toronto.ca)

As shown in the figures above, Pickering's development charge is \$17,599 as of 2024, while Toronto's is \$117,169 for Single & Semis. This drastic difference in development charges makes suburban municipalities like Pickering much more attractive to developers compared to Toronto.

Another reason is the exclusionary zoning rules that make it difficult to develop more high-density projects in the Toronto region, particularly in the Yellowbelt (Bozikovic et al., 2019). Toronto's official plan states, "*Neighbourhoods are considered physically stable areas,*" and "*Development in established Neighbourhoods will respect and reinforce the existing physical*

character of the neighbourhood” (Bozikovic et al., 2019, pp. 92; City of Toronto, 2023). These policies and by-laws explicitly indicate that they do not welcome changes in pre-existing neighbourhoods, creating significant barriers to any development.

Furthermore, the NIMBY (Not In My Backyard) phenomenon significantly contributes to the Toronto region’s lag in developing more mixed-use communities, even when policies permit such developments. This phenomenon occurs when residents oppose developments or changes in their local area (Senecal & Rayburn, 2006). The opposition is often based on concerns about increased traffic, noise, changes in neighbourhood character, or potential negative impacts on property values. However, there is another side to NIMBY-ism; it highlights the intensity of community activism (Senecal & Rayburn, 2006, pp. 246) and the ability of citizens to defend their environment in a well-documented way. By allowing for confrontation and the expression of interests and disputes, NIMBY-ism encourages the expression of values and discourses that can lead to building partnerships (Senecal & Rayburn, 2006, pp. 246). Balancing competing interests while promoting densification requires strategic approaches that engage communities, address concerns, and emphasize the long-term benefits of sustainable urban development.

Despite the many barriers to the growth of the 15mC concept in the Toronto region, its future implementation is still possible. The concept offers tremendous benefits, including the potential to improve the region’s spatial form. There are already several policies promoting the development of mixed-use communities. Municipalities such as Markham and Toronto have demonstrated openness to transit-oriented developments (City of Toronto, 2021; City of Markham, 2014). With the right adjustments, existing policies can be modified to align with the 15mC components, provided that the barriers to its realization are addressed.

Conclusion

To encapsulate, the 15mC concept fundamentally challenges the centralized hierarchy of urban life by advocating for neighbourhood-scale socio-spatial organization that enables individuals to accomplish daily tasks within a 15, 20, or 30-minute radius. This model offers numerous benefits, including improved quality of life, environmental sustainability, and enhanced public health outcomes. However, the journey to realizing these benefits is filled with challenges, especially in regions like Toronto, where car-centric planning and suburban development are deeply entrenched.

Legislative and policy barriers, along with social disagreements, currently hinder the development of 15mC communities. Despite these obstacles, the 15mC concept remains a viable alternative for Toronto's future growth and development. It holds the potential to effectively reorganize the micro-scale of urban regions and address the challenges of suburbanization by restructuring everyday life.

Embracing the 15mC model in the Toronto region holds the potential to foster the development of more self-sufficient communities, thereby transforming the area into a polycentric urban region characterized by robust, independent neighbourhood centres. The 15mC concept transcends its role as a mere urban planning tool; it represents a strategic framework aimed at decentralizing the traditional urban hierarchy. This decentralization fosters a network of interconnected, self-reliant communities. If implemented effectively, this model could lead to a

profound reshaping of the socio-spatial organization within the Toronto region, promoting a more democratic, equitable, sustainable, and resilient urban future.

Additionally, such an approach would address existing disparities by distributing resources and opportunities more evenly across the region, potentially mitigating issues related to congestion, environmental degradation, and socio-economic inequality. The 15mC model, therefore, presents not just a vision for more efficient urban living but also a pathway towards a fundamentally more inclusive and balanced urban landscape.

The Pillars of Service Provision in Peel: A Shift toward Polycentricity in the Nearly Dissolved Peel Region

Abstract

This paper explores the reciprocal relationship between non-profit organizations and regional government. A strong partnership between these entities can be highly effective, provided their goals remain aligned. The paper focuses on guiding the residents of the Peel region before Ontario Premier Doug Ford's announcement regarding the cancellation of Peel's dissolution. It examines the roles of involved entities, particularly Metamorphosis, and explores the impact of their collaborations on achieving shared objectives. I argue that social service delivery should be carried out not by top-down government organizations, but through a bottom-up approach. This approach, championed by Metamorphosis member organizations, advocates for replacing hierarchical service delivery with a network-based, bottom-up model. The discussion is framed through a polycentric perspective that encourages collaboration between government and non-profits. This method better serves the community in need and establishes a democratic, pluralistic, and accessible service delivery model.

Introduction and Literature Review

Peel, a regional municipality located west of Toronto, encompasses the municipalities of Mississauga, Brampton, and Caledon. As one of the most demographically diverse regions in the country, these municipalities are home to a large number of racialized immigrants (Biglieri & Keil, 2024, pp. 231). In particular, Brampton and Mississauga have a racialized population of 81% and 62% respectively (Region of Peel, 2021b). In addition, the average number of people

per dwelling (Persons per unit, PPU) is the highest in the Toronto region, at 3.22 (Region of Peel, 2021c), with multigenerational households contributing to this high figure.

Based on interviews with Sherona Hollman, Director of Strategy and Transformation at the Region of Peel, and information from the Peel Region website, Peel faces significant disparities similar to many municipalities in Ontario. Challenges such as affordable housing, rising rates of homelessness, increasing cost of living, increasing pressures on the health care system, and ongoing pandemic recovery (Hollman, personal communication, 2024). These issues of socio-economic disparities are particularly seen in racialized communities during the COVID-19 pandemic. Samantha Biglieri and Roger Keil highlighted in their chapter that a significant number of South Asian workers in the trucking sector regularly traveled between hotspots in the US and Canada. These jobs are often unstable, with limited employee benefits like sick leave (Biglieri & Keil, 2024, pp. 231; Vohra-Miller et al., 2020). Their paper and news articles have discussed that the issue was not a reluctance to social distance but rather a necessity to work to sustain their families. Many of these workers do not come from wealthy backgrounds. These workers, including a large percentage of warehouse and factory employees are international students from India who have found their home in Peel (Biglieri & Keil, 2024, pp. 231; Bascaramurty et al., 2021).

Due to ongoing issues of socio-economic disparities in Peel, the Government of Ontario proposed the Hazel McCallion Act in May 2023, which if passed, would begin the process of dissolving Peel Region so that municipalities can have independence in delivery of service and infrastructures (Government of Ontario, 2023). However, according to news articles, there are speculations of political drama behind the proposal for dissolution (Jones & Casey, 2023), in particular, to keep the then-Mayor of Mississauga Bonnie Crombie from competing with Doug

Ford in the next Provincial election in 2026 by catering to her wish for more independence. Gathering from the announcements made in news articles, perhaps by pure coincidence, when Crombie won the Ontario Liberal election on December 2nd, 2023, in just a few days, Ford announced his plan to cancel Peel dissolution on the 13th (DeClerq, 2023), with reason being that a full dissolution would cause significant tax hikes and disruptions to services. The potential political motivations and justifications provided by the Ford Government will be explored in detail in later sections of this paper.

To explore the impetus for municipalities' support for Peel dissolution, particularly Mississauga, a retrospective lens would be required. Prior to the announcement of the dissolution reversal, according to the statement made by the Ministry of Municipal Affairs and Housing (MMAH), during the announcement for dissolution, they would ensure a fair outcome for the three municipalities that prioritizes the preservation of frontline services and workers (Government of Ontario, 2023). Bonnie Crombie reacted positively to the announcement, she stated: *"I want to thank the Minister and the Premier for answering our calls for an independent Mississauga...we're ready to stand on our own two feet and make our own decisions about the future of our city. An independent Mississauga will allow us to be more nimble when it comes to responding to the housing crisis, increase efficiencies, reduce duplication and save residents time and money"* (Government of Ontario, 2023). According to Glover and Draaisma's article from CBC, Mississauga's reasoning can be attributed to the fact they are the third largest municipality in Ontario, this means the largest number of taxpayers in Peel which causes an uneven number of contributions among the municipalities (2022). They felt they were not receiving adequate amounts of services and infrastructure investment from the region even though they had contributed the most tax money (City of Mississauga, 2023a).

Turning attention to infrastructure, Jean-Paul Addie discusses in his paper "Governing the Networked Metropolis: The Regionalization of Urban Transformation in Southern Ontario" that transportation infrastructure fragmentation in the Toronto region can lead to social inequity and exclusion (Addie, 2016, pp. 137). This issue is evident in Peel, where the broader provision of services and infrastructure is lacking. While the dissolution case is less focused on transportation specifically, it highlights the broader problem of fragmented services and infrastructure resulting from inequity.

A key distinction must be made between equity and equality, as these terms are often confused. McGary (2004) explains that equity planning aims to achieve a fair distribution of goods and resources within a geographic boundary, typically through state intervention. This approach seeks to ensure that all citizens, especially the least advantaged, benefit from public policies (McGary, 2004, pp. 82). Unlike equality, which advocates for the equal distribution of resources, equity considers varying degrees of need to create an environment where people's assets can be equalized. McGary illustrates this with a quote from *Business Week*, explaining that egalitarians seek to use the federal government to redistribute wealth and income to equalize differences in education and family backgrounds (McGary, 2004, pp. 83). Thus, while equality involves uniform distribution, equity tailors resource allocation based on need to achieve a more balanced outcome.

Lastly, polycentricity—an overarching theme of this portfolio—relates to resource distribution and collaboration, particularly evident in the interactions between government and non-profit organizations in Peel. As Kwon and Seo (2018) describe two types of polycentricity exist in urban regions. The first, morphological polycentricity, focuses on the connectivity of spatial

forms that are almost equal in size, determined by individual employment centres due to fragmentation (Kwon & Seo, 2018, pp. 2; Addie, 2016, pp. 128).

However, this paper places greater emphasis on the second type, functional polycentricity. This form emphasizes the flow and interaction between different cities or entities (Kwon & Seo, 2018, pp. 2). This interaction fosters collaboration, ensuring a functional urban region regardless of the dissolution's outcome. Hypothetically, even if Ford had not canceled the dissolution of Peel, polycentric synergies could still exist through collaboration and partnerships between municipal governments and non-profit organizations by advocating for social service delivery to be carried out not by top-down government organizations, but through a bottom-up approach. A hierarchical service delivery to be replaced by non-profit organizations that is network-based in a bottom-up form. This method may better serve the communities in need such as youths, homeless, and new immigrants, establishing a polycentric democratic, multi-nucleated, and accessible service delivery model (Keil, personal communication, 2024).

Chronic Issues and Inception of Dissolution

Chronically Underfunded Health Infrastructures

Several factors contributed to the push for Peel's dissolution, with chronically underfunded infrastructure being a significant one. During the height of the COVID-19 pandemic, these underfunded infrastructures failed to serve the community effectively (Meagher, 2024; Biglieri & Keil, 2024, pp. 232; Region of Peel, 2023). A report by Blueprint ADE, presented to the Peel Regional Council, revealed an \$868 million annual shortfall in provincial community service funding, translating to a per capita gap of \$568 in Peel (Meagher, 2024). As Gurpreet Malhotra, executive director of Indus Community Services, stated, *“You have an area that’s under-*

resourced, under-supported, and then you throw a pandemic at it” (Biglieri & Keil, 2024, pp. 233; Nasser, 2020). It is evident that Peel’s severe underfunding placed immense pressure on the healthcare system (Hollman, 2024), leading to the devastating effects of the pandemic in the region.

Moreover, a report released by Peel Region during the AMO Conference in 2023 indicated that base funding for Peel Public Health was frozen from 2018 to 2021. In 2022, funding increased by only 1%, reducing the funding gap from \$8.5 million to \$8.1 million (Region of Peel, 2023, pp. 2). Paramedic services also suffer from severe underfunding due to the Ministry’s 50:50 funding model, which creates a lag that does not account for current inflation and service pressures (Region of Peel, 2023, pp. 2). Additionally, the region must cover the Province’s share of increased costs each new budget year, with provincial funding made available only in the following year (Region of Peel, 2023, pp. 2).

These fiscal reports indicate a significant resource shortfall, demonstrating the region’s inability to remain resilient and support its residents during crises such as the pandemic.

Socio-Economic Issues amongst residents

Socio-economic disparities among residents are not unique to the Peel region. The region’s underfunding was not the sole contributor to the overwhelming effects of the pandemic. As briefly touched upon in the introduction, issues such as housing prices and the rising cost of living have significantly exacerbated Peel’s situation through the phenomenon of multigenerational housing (Biglieri & Keil, 2024).

This issue is examined by Samantha Biglieri and Roger Keil in their paper “Desynchronized Infrastructures of Care: Suburban Imaginaries Re-Examined.” They used the case study of an

area in Brampton, L6P, where 89% of the residents are racialized, and the median household income is \$102,070 (pp. 233). However, the high income is due to multigenerational households, where several workers pool their earnings together. If examined individually, the median income per person would be \$26,139 (pp. 233). A large percentage of the population comes from South Asia (66%), with many Indian international students working in subprime locations that offer limited benefits and paid sick leave (Vohra-Miller et al., 2020; Biglieri & Keil, 2024, pp. 231, 233).

The lack of adequate job benefits and sick leave made it difficult for members of multigenerational households to socially distance themselves from the virus, increasing the possibility of spreading the virus to household members and creating a web of virus transmission.

Multiple factors contribute to multigenerational households in the region. While economic factors play a significant role, cultural preferences are also crucial. Many immigrant families prefer multigenerational living because it fosters strong family bonds, mutual support, and care across generations, which are highly valued in many cultures (Battams, 2022).

According to the Statistics Canada Survey in 2021, the Census of Population counted just under half a million multigenerational households. Among these families, 1 in 10 children aged between 0 to 14 years old, accounting for 9% of the population, lived with at least one grandparent in 2021 (Statistics Canada, 2021). Families new to Canada are also more likely to live in multigenerational households than those born in Canada. Data from the 2017 GSS showed that grandparents born outside Canada (9%) were more than twice as likely as those born in Canada (4%) to live with grandchildren.

As a result, Census Metropolitan Areas with the highest proportion of multigenerational households in the 2021 Census also have some of the highest percentages of newcomers, such as Brampton at 28% (Battams, 2023; Statistics Canada, 2021).

Aside from cultural preferences for multigenerational living, unaffordability has also limited the ability of more people to purchase their own homes and live alone. According to the report “Housing Trends and Affordability” produced by RBC in 2023, Canadian cities are experiencing a severe unaffordability crisis due to the housing market surge and high interest rates (Hogue, 2023).

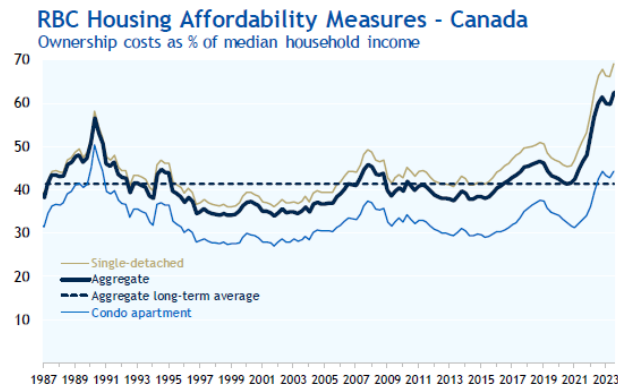


Figure 15 RBC Housing Affordability Measurements (Source: Hogue, 2023)

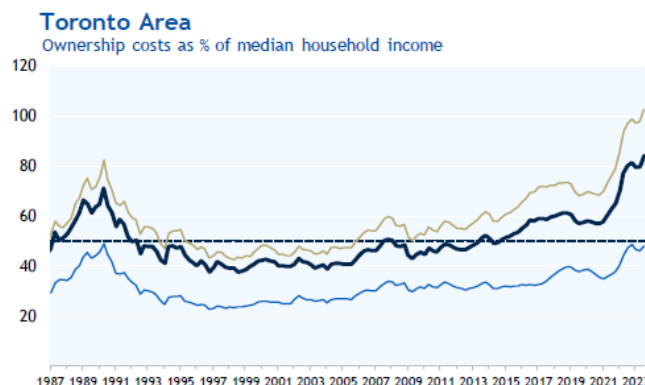


Figure 16 RBC Toronto Area - Ownership costs as % of median household income (Source: Hogue, 2023)

According to statistics from RBC, during the third quarter of 2023 (July, August, and September), increases in mortgage rates and home prices raised RBC's aggregate affordability measure for the country to 62.5% (Hogue, 2023). A rise in this measure indicates that houses are becoming less affordable. The report shows that for residents in the Toronto region with an RBC mortgage, the share of income needed to cover ownership costs was 84.1% (Figure 2) as of the third quarter of 2023.

In addition to rising mortgage rates and house prices, housing subsidies in the Peel region have decreased over the past several years. Between 2017 and 2021, federal and provincial funding dropped by 20% (Region of Peel, 2023, pp. 2). Even with \$194 million in reserve contributions over the past decade, funded by Peel taxpayers, the unfunded gap in housing subsidies remains a substantial \$678 million. This severe gap in subsidies diminishes the possibility of affordable housing and other services that could contribute to a more affordable environment.

The combination of cultural preferences and difficulties in securing jobs that provide adequate paid sick leave and worker benefits, along with soaring housing unaffordability, impacts residents' decisions to choose multigenerational households. This situation, in turn, has led to higher infection rates, placing immense stress on the already underfunded healthcare system and contributing to the devastating impact of the pandemic in the Peel region.

A Speculative Political Wrestle: Crombie and Ford

Going back to the topic of the Peel dissolution, in retrospect, Ford has already cancelled the dissolution of Peel back in December 2023 (DeClerq, 2023). While Paul Calandra, Minister of Municipal Affairs and Housing, cited concerns about potential tax hikes and disruption to critical services as the reasons for the reversal, stating, *"We've since heard loud and clear from*

municipal leaders and stakeholders that full dissolution would lead to significant tax hikes and disruption to critical services the people of Peel Region depend on" (DeClerq, 2023), the motives may extend beyond these explanations. I believe that the proposal for Peel's dissolution represents a political struggle between Ford and Crombie, with all residents bearing the impact.

Speculation had been circulating that Crombie was contemplating a run in the 2023 Ontario Liberal Party Leadership election, scheduled for December of that year. On May 23, 2023, Crombie confirmed these speculations by establishing an exploratory committee for a leadership bid (Reddekopp et al., 2023). Then, on December 2, 2023, Crombie won the Ontario Liberal leadership race and shifted her focus to challenging Ford in the 2026 Ontario election, stating, *"Ford and his conservative cronies have been the opponents in all of our sights this entire campaign"* (Harrison, 2023).

Before Crombie's victory in December, it was speculated that the announcement to dissolve the Peel region was intended to keep Crombie in Mississauga and prevent her from competing with Ford in the provincial election. Crombie has long been a strong advocate for a more autonomous and independent Mississauga, a move she refers to as 'Mexit,' drawing a parallel to Brexit (Glover & Draaisma, 2022). She has expressed determination to complete the mission started by her predecessor, Hazel McCallion, to make Mississauga an independent city.

Although there is no concrete evidence that Ford used Peel's dissolution to keep Crombie out of provincial politics by satisfying her desire (Krishendeholl et al., 2024), the timing of various announcements by political figures aligns too seamlessly with this narrative. Notably, right after Crombie won the Ontario Liberal leadership in early December, the Ford government promptly announced its intention to reverse the dissolution, which officially occurred on December 13th (DeClerq, 2023).

Transparency in Policy Making

The announcement of the Peel reversal sparked discussions about the transparency and effectiveness of the province's decision-making process (Krishendeholl et al., 2024). Calandra cited potential tax hikes and disruptions to critical services as reasons for reversing the dissolution. This is problematic because the initial announcement was made in May 2023, yet it took six months to reverse the decision, suggesting a lack of prior research on the financial impact before the initial announcement (Krishendeholl et al., 2024).

As Arvind Krishendeholl, Luisa Sotomayor, and Roger Keil discuss in their article, this is not the first time the Ford government has shown a lack of transparency. Similar instances include the Greenbelt reversal (Callan & D'Mello, 2023) and the ruling out of fourplexes (Powers, 2024; Stone, 2024). These political maneuvers are taxing communities and set a dangerous precedent by undermining the democratic autonomy of municipal-level governance (Krishendeholl et al., 2024).

Public Consultation and Collaboration

As Krishendeholl et al. pointed out, various announcements by this government have lacked public consultation. The 2023 annual report on the Operation of the Environmental Bill of Rights (Office of the Auditor General of Ontario, 2023), highlights violations by three ministries: Municipal Affairs and Housing; Environment, Conservation and Parks; and Natural Resources and Forestry.

Some quotes from the report include:

- a. *“The Municipal Affairs Ministry’s Greenbelt proposal notices lacked key information and, in some cases, included inaccuracies. Also, because of the short timeline for the*

Greenbelt changes, the Ministry could not complete a comprehensive analysis of all of the more than 35,000 comments in time to fully inform its decision-making” (pp. 4).

- b. *“The Natural Resources Ministry did not consult Ontarians about the repeal of the Duffins Rouge Agricultural Preserve Act, 2005, which was intended to permanently restrict the use of land in the Duffins Rouge Agricultural Preserve to agriculture” (pp. 4).*
- c. *“These Ministries posted four proposal notices for Bill 23, the More Homes Built Faster Act, 2022, but the bill was passed before the end of the public consultation period. This means these Ministries could not have considered all of the comments they received on Bill 23 before final decisions were made. Also, the housing-related proposal notices were posted one day after municipal elections were held across the province. Although these proposals significantly affect Ontario municipalities, many new municipal councils were not even sworn in, let alone able to submit comments, before some of the decisions were made” (pp. 4).*

These remarks illustrate how the Ford government has severely undermined public consultation and democratic processes, increasing public distrust in authority (Duggal, 2024).

Shifting the focus from provincial politics to Peel, this increasing distrust in government creates an opportunity for non-profits. Networks like Metamorphosis can step in and collaborate with the regional government to provide essential services to the residents that the government was meant to serve.

Metamorphosis, City Institute, and Service Delivery

Metamorphosis

As a result of Doug Ford's actions over the past year, it highlighted the need for transparency and public participation, and are essential components of effective policymaking (Krishendeholl et al., 2024). This is why Metamorphosis Network plays a critical role in creating a more equitable Peel region. Metamorphosis is a network of over 100 non-profit community service agencies that ensures community services in the Peel region are fully funded and meets the need of the community (Metamorphosis, 2024; Krishendeholl et al., 2024).

The network has been a key advocate for the community services sector, highlighting the crucial role of regional services like housing and health infrastructures. This is critically important for communities like Peel who have faced significant underfunding from the province for many years (Krishendeholl et al., 2024; Region of Peel, 2023, pp. 2; Meagher, 2024; Metamorphosis, 2024). One of their roles was prior to the reversal of dissolution, the Metamorphosis Network served as the hub for communication among its members, the media, the transition board, municipalities, and other stakeholders (Metamorphosis, 2024). In partnership with the Region of Peel, they acted as a liaison between the affected residents and the government to ensure the effective provision of services, particularly at a time when residents are confused about what the future holds for the region.

All organizations within the Metamorphosis Network are dedicated to serving their communities.

Selected examples include:

Indus Community Services: An accredited not-for-profit organization that has been serving the local community for over 35 years, providing culturally appropriate services to newcomers, families, women, and seniors. Specific services include:

- Employment Counselling and Job Search Workshops: Offering one-on-one counselling, resume and cover letter critiques, interview coaching, and employer connections (Indus Valley Organization, 2024).
- English Language Training (LINC – Language Instruction for Newcomers to Canada): Helping newcomers improve their English communication skills, which enhances their community engagement and employment opportunities. The program also includes childcare for attending parents.

Catholic Family Services Peel Dufferin: Based in Brampton, this organization offers a range of services such as individual, couples, and family counselling. They also provide programs and support groups focused on addressing domestic violence within families (Catholic Family Services Peel Dufferin, 2024)

In addition to being the medium of communication and providing services during unprecedented times, the network provided crucial information for the residents. The Metamorphosis Network published a report on May 22nd, 2024, titled “*Provincial Funding for Social Services in Peel Region*” commissioned by the network to ensure substantial evidence in supporting the argument that Peel was severely underfunded by the Government of Ontario through a direct comparison with 7 other municipalities in Ontario with population surpassing 500,000 (Metamorphosis, 2024b, pp. 3) – Toronto, Ottawa, Hamilton, York, Durham, Waterloo, and Halton – in which the persistent result were Peel being the lowest in all comparisons.

Table 1: Provincial Funding Gaps for Services in Peel Region (2015–2022 Average, 2022 Constant Dollars)

Channel	Per Capita Gap	Annualized Total Gap
Municipal Services (Core)	-\$59	-\$86,821,103
Municipal Services (Social)	-\$145	-\$214,898,278
Nonprofit Services (General Assistance and Community Support)	-\$258	-\$390,474,392
Local Health Integration Networks (LHINs)	-\$65	-\$97,210,748
Public School Boards	-\$37	-\$56,677,483
Roman Catholic Separate School Boards	-\$15	-\$22,386,374
Total	-\$578 ¹	-\$868,468,378

Figure 17 Provincial Funding Gaps for Services in Peel Region 2015-2022 (Source: Metamorphosis, 2024b)

According to the report, the Province of Ontario allocates an average of \$578 less per capital annually to Peel residents for municipal and social services compared to the average allocation in seven other named Ontario municipalities (Metamorphosis, 2024b, pp. 3). This data is crucial for highlighting the significant funding shortfall in Peel. It underscores the urgent need for increased investment to adequately serve its residents and support the broader urban region.

City Institute

In addition to Metamorphosis’s partnership with the Peel Region government, they also collaborated with the City Institute at York University to host a panel discussion on December 7, 2023, titled “Peeling back the layers: Dissolution, social impacts, and inequities in Peel Region” (City Institute, 2023). This event focused on the transition of Peel Region in the context of governance restructuring and its potential future for residents. The panel featured numerous scholars and stakeholders from the Metamorphosis Network, who brought years of expertise to discuss the various scenarios and implications if the dissolution had proceeded.

The panel discussion featured a distinguished lineup of speakers, each bringing valuable insights into the then-imminent Peel dissolution:

- Professor **Luisa Sotomayor**, Director of the CITY Institute at York University, and **Arvind Krishendeholl** of Moyo Health & Community Services, provided welcomes and introductions, setting the stage for the discussion on Peel's potential dissolution.
- **Gurpreet Malhotra** of Indus Community Services and Metamorphosis Network, alongside Professor **Roger Keil**, discussed the context of Peel, highlighting issues of systemic underfunding and the complex challenges faced by the region.
- Professor **Zachary Spicer** from the School of Public Policy and Administration at York University, and **Sharon Mayne**, CEO of Catholic Family Services of Peel Dufferin, explored the concepts of good governance and the costs and benefits associated with the restructuring of Peel Region.
- **Angela Carter** of Roots Community Services, **Gary Kent**, CAO of Peel Region, and **Rachel Laforest**, a professor in the Department of Political Studies at Queen's University, discussed the implications for the communities and the impacts on the social services sector in the context of Peel's restructuring.

The partnership between the City Institute and Metamorphosis focused on researching precedents of dissolution and the implications of governance restructuring for the entire Toronto region within the framework of new regionalism. This research was led by Professor Luisa

Sotomayor and Professor Roger Keil, along with several graduate research students from York University.

A segment of the key points developed through literature review, prior knowledge, and collaboration with Metamorphosis by establishing the Metamorphosis-City Working Group (MCWG) includes:

- **Rejecting Racist Narratives:** Metamorphosis played a significant role in countering racist narratives that attributed the high rate of COVID-19 infections in 2020—55% of which were among South Asians—to cultural factors such as multigenerational housing. Instead, Metamorphosis highlighted structural factors like precarious employment and lack of paid sick leave as the true contributors (Metamorphosis, 2020; Sotomayor et al., 2023).
- **Improving Vaccination Rates:** Initially, vaccination rates in Peel Region were low and only increased through concerted community efforts, spearheaded by local organizations (Krishendeholl & Beland, 2023).
- **Recalibrating Local Governance:** The research questions whether the intended recalibration of local governance, driven by cost and tax burdens, will impact human service delivery. It emphasizes the need to consider quality of care, community resilience, democratic governance, and sustainable funding in the region (Sotomayor et al., 2023).
- **Optimizing Governance Models:** The research also explores which governance models would best serve Peel's human service sector, advocating for the enhancement and protection of service needs amidst governance changes, and influencing policy decisions to reduce existing inequalities and service gaps (Sotomayor et al., 2023).

During the panel discussion, the central theme was the restructuring of governance, with speakers examining both the positive and negative impacts of such a shift. On the positive side, dissolution would grant each municipality greater autonomy, allowing them to tailor their policies to the unique needs of their residents. This could potentially lead to more responsive and efficient local governance (City Institute, 2023).

However, the discussion also highlighted significant drawbacks. The region would face provincial pressures without prior community consultation and a tight timeframe of only 18 months. Additionally, how responsibilities would be allocated was a major point of concern.

At the time of the panel discussion in December 2023, the reversal of the dissolution had not yet been announced. Thus, the potential outcomes of the dissolution could only be speculated upon based on precedent cases and existing literature. Despite this uncertainty, the panel provided crucial information for residents and community organizations, who would be significantly impacted by governance restructuring. Amid this transitional chaos, Metamorphosis acted as a bridge between the government and residents, aiming to ensure a smooth transition if the dissolution were to proceed.

Interview with Peel Region Director of Strategy & Transformation on Service Delivery

(For the full interview, refer to the Appendix)

To gain perspective from a key figure in the Peel Region regarding on the dissolution process and service delivery, I interviewed Sherona Hollman, the Director of Strategy & Transformation.

Question (Shortened): In light of the proposed but ultimately cancelled dissolution, can you share insights into the approach or any approach to be adopted by Peel Region to ensure

residents were supported and their concerns addressed, even in the absence of specific plans or initiatives being formulated at the time?

Answer: *“Our residents and community are at the forefront of all we do. As civil servants, we work diligently everyday to ensure the delivery of high-quality seamless services to all residents of Peel.”*

“The announcement of potential dissolution did not shift our focus but rather heightened our focus on business continuity of all services, ensuring no residents were in any way disadvantaged or compromised because of the dissolution process.”

“Residents and partners were also able to provide feedback directly to the Transition Board via their feedback process.”

Question (Shortened): In light of these challenges, what ongoing initiatives or strategies Peel Region has implemented to address systemic inequities and promote inclusive growth. Specifically, how is the region addressing the socio-economic disparities highlighted by the pandemic, and what measures are being taken to strengthen public health infrastructure and support vulnerable communities?

Answer: *“We continue to apply the lessons from COVID in strengthening our Public Health services such as advancing the lens of health equity and immunization services. We also continue to support vulnerable communities and marginalized individuals, through various active strategies such as our Community Safety and Well-Being Plan, Diversity, Equity and Inclusion Strategy, Housing & Homelessness Plan, and day-to-day delivery of services through our public health services, income support, senior services, early years and child and community investment.”*

Question (Shortened): What do you perceive as the foremost challenges and opportunities confronting Peel Region in the realm of urban planning and community development? Could you elaborate on the strategies and initiatives the region is implementing to tackle these challenges and capitalize on the opportunities for sustainable growth and community well-being?

Answer: *“We have many strategies in place to tackle the numerous challenges we are facing, such as affordable housing, climate change, community safety and well-being, asylum seekers, and homelessness. However, strategies and action plans are not enough. We need ongoing sustainable funding to meet the increasing complex needs that are in front of us and will continue to grow. We continue to advocate and work closely with our provincial and federal partners for sustainable models of funding.”*

“We also need stronger partnerships across all sectors; greater cross-sectoral and municipal partnerships. The challenges we are facing require an all-government response as well as enhanced partnerships with the non-profit and private sector.”

“One example of partnership is Peel Region’s partnership with Metamorphosis, a network of over 100 non-profit community service agencies, that formed during the period of potential dissolution. Metamorphosis continues to work with Peel and has undertaken a research project, with findings demonstrating the inadequate level of funding Peel is receiving in comparison to a number of growing neighboring municipalities. Metamorphosis is actively advocating for Peel residents and the community.”

In our exchange, Sherona Hollman outlined the services currently available to Peel residents and acknowledged the persistent socio-economic disparities within the population that the region is actively working to mitigate. She also emphasized the crucial role that the Metamorphosis

Network plays in facilitating communication between the government and residents, highlighting the importance of strong partnerships in addressing the complex challenges faced by the Peel Region.

Partnership toward Polycentricity

Service Provision Collaboration

To reiterate, over a hundred non-profit community service agencies (Metamorphosis, 2024) have partnered with the Peel region to address chronic issues of underfunding and inefficiencies in service provision by stepping up to serve their community. Since the announcement of dissolution, these non-profits have united under the Metamorphosis Network to ensure information is effectively transitioned from the government to the residents. The role of these service agencies has undeniably solidified the importance of creating an equitable and resilient community where all residents receive the help they need.

For statistical evidence, Dachis (2010) examined the role of waste collection when municipalities delegate it to private services. Municipalities that contracted with a private firm for waste collection realized a cost saving of 24% (Dachis, 2010, pp. 13).

Table 4: Change in Cost per Household From Types of Contracting			
	Disposal	Collection	Recycling
Contracting in general	-36%	7%*	-23%
Private Contracting	4%*	-24%	1%*
Note *Effect of private disposal and diversion contracting, and contracting in general in collection services are not statistically significant at even the 10 percent level of significance. Cost savings are regression coefficients (transformed from logarithms) that represent a comparison of costs between a municipality with no contracting to a municipality with full contracting. Source: Author's calculations from OMMAH.			

Figure 4 Change in Cost per housing from Types of Contracting in Ontario Municipalities (Source: Dachis, 2010, pp. 13)

Spicer and Found (2016) discuss service provision within the context of inter-municipal cooperation, noting that municipalities can be hesitant to engage due to concerns over reduced flexibility and potential threats to their autonomy (pp. 4). These risks are more pronounced in inter-municipal collaborations but diminish when the partnership is between the government and non-profit service agencies. Inter-municipal cooperation places municipalities on the same hierarchical level, whereas partnerships with non-profit organizations, as seen in the Peel region, do not pose the same risks (Wellesley Institute, 2011).

Canadian municipal governments are recognizing that effectively addressing complex social challenges requires collaboration beyond a single organization (Wellesley Institute, 2011, pp. 24). In the Peel region, chronic underfunding of health infrastructures highlights this need. During crises such as the COVID-19 pandemic and the proposed dissolution of Peel, the region's shortfalls were exacerbated by systematic underfunding (City Institute, 2023; Krishendeholl et al., 2024; Region of Peel, 2023, pp. 2; Meagher, 2024). Community non-profits have played a crucial role in bridging and linking social capital between the government and communities (Wellesley Institute, 2011, pp. 25).

Polycentricity found within Collaboration

After briefly discussing the factors contributing to socio-economic disparity, the political motivations behind the proposed dissolution of Peel, and the role of stakeholders in navigating this situation, this paper connects Peel's current circumstances to the concept of polycentricity.

Building on Kwon and Seo's (2018) discussion of polycentricity, particularly functional polycentricity, which emphasizes the flow and interaction among different cities (pp. 2), my

interpretation expands beyond physical interactions (Cladera et al., 2009; Copus, 2009; Grunfelder et al., 2015; Lin et al., 2015; Zhang et al., 2021; Lv et al., 2017; Li et al., 2018; Kwon & Seo, 2018; Lambregts, 2006; Derudder et al., 2021; D'Acci, 2013). In the context of collaboration between non-profit service agencies and governments, the focus shifts to service provision.

In this paper, I examined how the Peel region government, faced with severe underfunding, struggled to provide services to residents (City Institute, 2023; Krishendeholl et al., 2024; Region of Peel, 2023, pp. 2; Meagher, 2024). Non-profit service agencies stepped in to partner with the government, ensuring that residents still received essential information and services. While this reliance on non-profits highlights the government's inability to fully support its residents, it also provides alternative access to services. Non-profits serve as vital resources, offering various forms of assistance and creating networks that link government to community knowledge and resources, thus enabling reciprocal engagement (Howarth, 2011, pp. 25).

However, when the government devolves responsibilities to non-profits, it does not guarantee equitable resource distribution within the community. McGary (2004) argues that everyone should receive a share of resources based on need, leading to equality. Glass (2018) contributes to this conversation by contrasting new regionalism and public choice perspectives using the Pittsburgh city-region case study. The regionalist perspective emphasizes economic competitiveness and development (Glass, 2018, pp. 1159), advocating for collaborative efforts that can lead to more robust and inclusive growth. This view supports the idea that partnerships between governments and non-profits can enhance service delivery by pooling resources and expertise. In contrast, the public choice perspective suggests that entities act in their self-interest, which can be counterproductive during regional transformations (Glass, 2018, pp. 1152). This

perspective warns of the risks involved in such collaborations, where self-interested actions may undermine collective goals and equitable resource distribution.

There are clear benefits to relying on non-profit organizations for service provision, especially when the government cannot fully serve its residents. However, collaboration with external entities still carries risks. While these risks may not be evident with Metamorphosis specifically, they do exist from a broader perspective. Glass's insights highlight the importance of mindful collaboration, ensuring that partnerships prioritize the public good over individual self-interests to achieve equitable and effective service delivery.

Conclusion

The chronic issues examined in this paper are not unique to the Peel region. As a case study, Peel has effectively highlighted systematic underfunding and socio-economic disparities while also illustrating the consequences of political conflicts and how communities can build resilience through partnerships with the government.

The reversal of the proposed dissolution of Peel Region marks a significant turning point in the discourse on urban development within the Toronto region. Although the dissolution did not proceed, the debate underscored critical issues related to governance and service delivery.

Increased autonomy over budgetary decisions and priorities would enable local governments to address specific challenges and disparities more effectively within their jurisdictions, much like local community non-profits operate. This approach aligns with principles of equity planning, ensuring that resources and services are distributed according to the unique needs of each community.

The evidence from the Peel region case underscores the notion that urban governance can be approached through different models. In light of this, I propose that social service delivery should shift away from top-down government models to embrace a bottom-up approach that actively involves collaboration with non-profits. By partnering with organizations such as Metamorphosis, we can transition from traditional hierarchical models to a network-based, community-centric approach. This model is more responsive to the specific needs of communities, fostering a polycentric perspective in service delivery that is inherently more democratic, pluralistic, and accessible. Such a transformation aligns with the principle often cited by planners, “*Good planning is guided by public interest*” (OPPI), ensuring that the delivery of services is not only more effective but also more equitable and inclusive. This approach leverages local knowledge and resources, creating a resilient framework that can adapt to the evolving needs of urban populations.

Portfolio Conclusion

As one of the most rapidly growing urban regions globally, the Toronto region faces significant challenges related to spatial organization, resource allocation, social inclusivity, and equity. The exploration of polycentrism across three interconnected papers in this portfolio provides a comprehensive perspective on reimagining the future of the Toronto region. Collectively, these papers have demonstrated how dismantling centralized hierarchies and adopting a polycentric model can create a more democratic, equitable, sustainable, and resilient urban environment.

The first paper on polycentrism has illustrated that reorganizing the socio-economic and socio-cultural spheres of the Toronto region towards a polycentric model, and adopting a pluralistic approach to growth and governance, ensures a more democratic, socially equitable, and sustainable future for the region. Through an in-depth analysis and case studies, the paper shows how shifting from a monocentric to a polycentric urban form can dismantle centralized hierarchies and promote balanced regional development. The importance of collaborative growth and the potential positive impact of neoliberal policies in fostering urban development are highlighted, suggesting that a pluralistic approach could achieve these goals.

The second paper on the 15mC explores the potential transformation of the core-periphery hierarchy in the Toronto region into neighbourhood-scaled forms of polycentricity. By addressing issues such as automobile dependency, urban congestion, and pollution, the paper suggests that the 15mC concept could significantly improve the quality of urban life. Detailed case studies, such as the Downsview Framework and Brampton's 20-Minute Walkable Neighbourhood, illustrate practical implementations of the 15mC model, highlighting its potential to create self-sufficient, neighbourhood-scaled communities. The socio-economic benefits, including enhanced public health, reduced commuting times, and greater social

inclusion, are discussed, suggesting that adopting the 15mC concept may help dismantle centralized hierarchies and promote a more democratic and socially equitable urban future for the Toronto region.

The final paper addresses the challenges of service delivery during the proposed but ultimately rescinded dissolution of Peel Region. It suggests that shifting from top-down hierarchical service provision to a network-based, bottom-up approach might be more attuned to residents' needs. The paper highlights the potential inefficiencies of the hierarchical government service delivery model due to systemic underfunding. By advocating for multiple sources of service provision, it proposes a polycentric, democratic, and accessible model. Through case studies and data analysis, the paper explores how collaborative efforts between government and non-profit organizations could better serve the community. The lack of transparency in the provincial decision to reverse the Peel dissolution and the effectiveness of bottom-up approaches like the Metamorphosis Network in addressing socio-economic disparities are examined. This suggests that a more equitable and accessible approach can be superior to a top-down hierarchical method.

In conclusion, this portfolio explores the concepts of polycentrism, the 15mC model, and innovative service delivery approaches, suggesting that these strategies could effectively address the multifaceted challenges facing the Toronto region. Collectively, the papers within this portfolio advocate for a vision of urban development that is not only more democratic and socially equitable but also environmentally sustainable. By influencing both the physical configuration of urban spaces and the modalities through which individuals access and interact with these environments, the portfolio articulates a comprehensive pathway for urban transformation. This approach seeks to accommodate the diverse needs of the region's

population, fostering communities that are resilient, adaptive, and capable of thriving amidst future uncertainties. Additionally, the proposed strategies emphasize the importance of inclusivity and participation in urban planning processes, ensuring that the benefits of development are equitably distributed and that all residents have a stake in shaping their urban futures.

Appendix

Interview Questions – Sherona Hollman (Director of Strategy & Transformation)

Please provide your responses to the following questions, using the designated format:

A: [Your Answer].

Part 1: Peel Region's Response to Potential Dissolution

- a) Given the announcement by Ontario Premier Doug Ford in 2023 regarding the potential dissolution of Peel Region, there was widespread concern and uncertainty among stakeholders about the region's future. Could you please elaborate on Peel Region's strategy to navigate through this period of uncertainty prior to the cancellation of the dissolution announcement by Premier Doug Ford?

A: Peel's strategy to navigate the immense uncertainty and disruption caused by the dissolution announcement was to focus on the people of Peel (our community, our residents, our employees). Ensuring business continuity of essential services to our 1.5M residents and over 200,000 businesses coupled with the health and well-being of our over 6000 employees was of utmost importance. This remains the case with the ongoing provincial reviews underway.

Other key components of our strategy entailed the focus on data, facts, working collaboratively with all key stakeholders and being transparent about the critical role of Peel.

Peel is an anchor institution providing essential services through all stages of life including housing & shelter, childcare services, social assistance, waste collection, water & wastewater treatment, arterial roads, specialized door to door transit for eligible residents (transhelp), paramedics, public health programs including disease prevention, immunization, long-term care services and heritage, arts, and culture services.

It was integral to shed light on the complexity, scale, integration, and economies of scale of Peel. Similar to other community anchors such as hospitals, Peel services are highly integrated and structured with the lens of efficiency and effectiveness to deliver, continuously improve, and innovate to meet the needs of those we serve at their time of time.

- b) In light of the proposed but ultimately cancelled dissolution of Peel Region, I'm interested in understanding the measures taken by the Director of Strategy & Transformation and Peel staff to prioritize the interests and well-being of Peel residents during this uncertain period. Can you share insights into the approach or any approach to be adopted by Peel Region to ensure residents were supported and their concerns addressed, even in the absence of specific plans or initiatives being formulated at the time?

A: Our residents and community are at the forefront of all we do. As civil servants, we work diligently everyday to ensure the delivery of high-quality seamless services to all residents of Peel.

The announcement of potential dissolution did not shift our focus but rather heightened our focus on business continuity of all services, ensuring no residents were in any way disadvantaged or compromised because of the dissolution process.

We also developed [principles](#) to ensure there was no disruption in services. Maintaining essential services and ensuring the well-being of staff who deliver and support the delivery of those services was crucial.

We were also intentional about communicating to our residents via our website ([Provincial review - Peel Region](#)) and through regular updates to Regional Council:

- June 8, 2023: [Bill 112 – Managing Through the Transition](#)
- September 14, 2023: [Bill 112 – September 2023 Update](#)
- February 8, 2024: [Update on Provincial Transition Board's New Mandate / Appendix 1: New Mandate and Scope of the Transition Board](#)

Some residents also reached out directly to discuss the impacts dissolution would have on the community, their property taxes and overall quality of life.

Residents and partners were also able to provide feedback directly to the Transition Board via their feedback process.

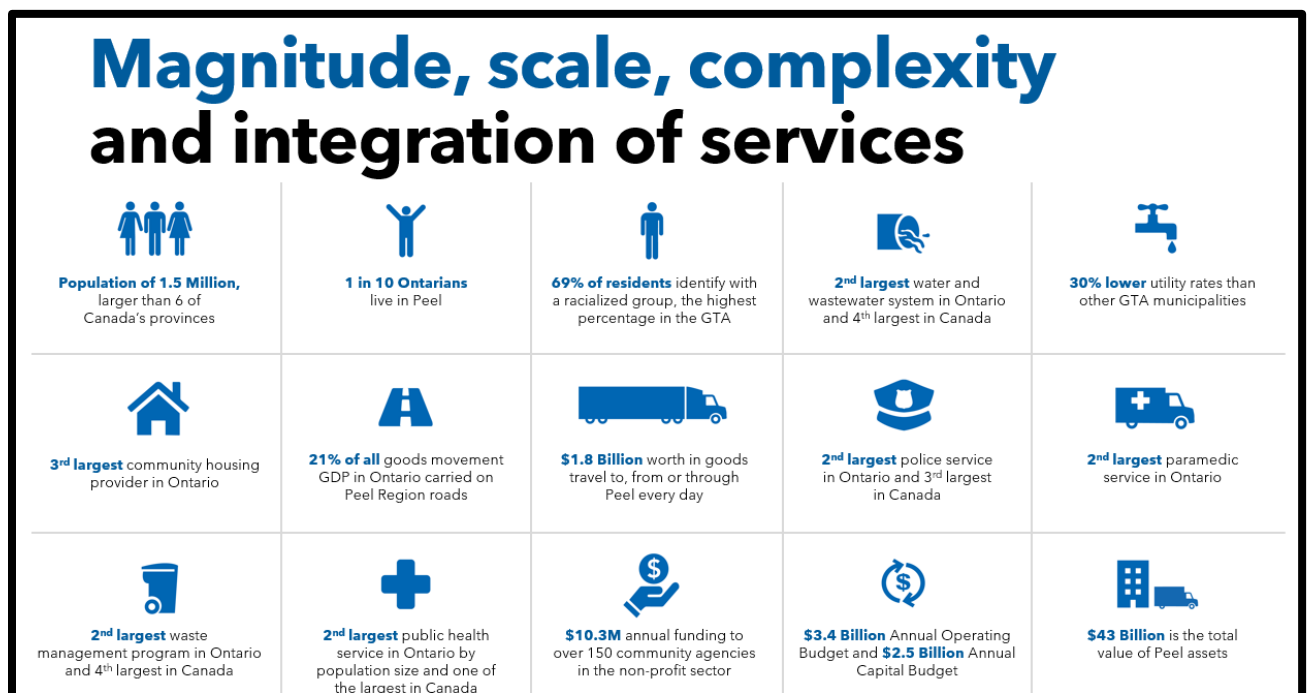
Peel's strategy also included open, transparent and timely communication to our employees and answering hundreds of staff questions.

- c) In retrospect, what key insights and lessons did Peel Region extract from the experience of navigating the potential dissolution? How have these lessons shaped and influenced the region's subsequent approaches to governance, guiding its trajectory towards a more resilient and inclusive future?

A: This has been quite the journey. Navigating potential dissolution resulted in immense stress & anxiety on staff at all levels, loss of talent, adjusted timelines to address critical community needs, increased workload, and an overall sense of uncertainty.

A key learning was the importance of telling the Peel story honestly, transparently, with confidence, and using data in a very intentional way to do so.

An example of how data was used to convey Peel's story is as follows:



Explaining the magnitude, scale, complexity, and integration of Peel resulted in drawing attention to many key critical facts such as that:

- **1 in 10 Ontarians** live in Peel; **69% of residents** identify with a racialized group, the highest percentage in the GTA
- Peel has the **2nd largest** water and wastewater system in Ontario and 4th largest in Canada
- Peel has the **2nd largest** waste management program in Ontario and 4th largest in Canada

- **21% of all** goods movement GDP in Ontario is carried on Peel Region roads and that **\$1.8 Billion** worth in goods travel to, from or through Peel every day
- Peel is the **3rd largest** community housing provider in Ontario
- Peel has the **2nd largest** police service in Ontario and 3rd largest in Canada
- Peel has the **2nd largest** paramedic service in Ontario and **2nd largest** public health service in Ontario by population size and one of the largest in Canada.

The strategy of telling the truth through key data and facts helped convey Peel's story and relevance.

Part 2: Addressing Socio-Economic Disparities and Strengthening Service Provision

- a) Peel Region stands as a vibrant hub where local and international cultures converge, alongside thriving industries. However, like many urban centres across Canada, Peel grapples with persistent socio-economic disparities. In the wake of the COVID-19 pandemic, Peel, particularly Brampton, was designated as a 'hot spot,' underscored the challenges faced, notably the complexities of containing the virus in multigenerational household. Furthermore, existing structural gaps in public health infrastructure, exacerbated by underfunding, have further strained the region's ability to meet community needs at time of crisis.

In light of these challenges, I'm keen to understand what ongoing initiatives or strategies Peel Region has implemented to address systemic inequities and promote inclusive growth. Specifically, how is the region addressing the socio-economic disparities highlighted by the pandemic, and what measures are being taken to strengthen public health infrastructure and support vulnerable communities?

A: Peel is a vibrant, dynamic, growing municipality. COVID-19 amplified the social determinants of health and brought to light several challenges impacting our community.

Additionally, like many municipalities within and outside of Ontario, the affordability crisis is felt in Peel. We face many challenges such as affordable housing, increasing asylum claimants, increasing homelessness, the working poor, increasing pressures on the health care system, increasing cost of living, ongoing pandemic recovery (to list a few).

Peel is also home to Canada's busiest airport, Pearson International Airport. This brings many strategic advantages and contributes significantly to the growth of Peel.

Increasing growth brings opportunities as well as challenges. We continue to apply the lessons from COVID in strengthening our Public Health services such as advancing the lens of health equity and immunization services. We also continue to

support vulnerable communities and marginalized individuals, through various active strategies such as our Community Safety and Well-Being Plan, Diversity, Equity and Inclusion Strategy, Housing & Homelessness Plan, and day-to-day delivery of services through our public health services, income support, senior services, early years and child and community investment.

Part 3: Shaping Peel's Urban Future in the GTA

- a) In your role as Director of Strategy & Transformation, what do you perceive as the foremost challenges and opportunities confronting Peel Region in the realm of urban planning and community development? Furthermore, could you elaborate on the strategies and initiatives the region is implementing to tackle these challenges and capitalize on the opportunities for sustainable growth and community well-being?

A: Peel is a microcosm for what we are seeing in many parts Canada and some parts of the world, vibrancy coupled with increasing complexities and challenges.

We have many strategies in place to tackle the numerous challenges we are facing, such as affordable housing, climate change, community safety and well-being, asylum seekers, and homelessness. However, strategies and action plans are not enough. We need ongoing sustainable funding to meet the increasing complex needs that are in front of us and will continue to grow. We continue to advocate and work closely with our provincial and federal partners for sustainable models of funding.

We also need stronger partnerships across all sectors; greater cross-sectoral and municipal partnerships. The challenges we are facing require an all-government response as well as enhanced partnerships with the non-profit and private sector.

One example of partnership is Peel Region's partnership with Metamorphosis, a network of over 100 non-profit community service agencies, that formed during the period of potential dissolution. Metamorphosis continues to work with Peel and has undertaken a research project, with findings demonstrating the inadequate level of funding Peel is receiving in comparison to a number of growing neighboring municipalities. Metamorphosis is actively advocating for Peel residents and the community.

- b) As the Director of Strategy & Transformation of Peel Region, how do you envision Peel's future role within the broader Greater Toronto Area, specifically in terms of fostering collaboration, addressing shared challenges, and promoting sustainable growth? Could you provide insights into the strategic direction and leadership initiatives Peel Region is undertaking to fulfill this vision, considering the unique opportunities and challenges faced by the region?

A: As Peel continues to grow, so too will its critical role in collaborating and partnering for greater social impact. I foresee greater partnerships, collaboration, and opportunities to innovate with the broader municipal sector, non-profit and private sectors as well as other orders of government.

Our world is increasingly complex, and our community is facing multidimensional, compounded challenges. We need to continue to look for non-traditional ways to solve problems and intentionally apply the lens of innovation, foresight, collective impact, and systems thinking to tackle the large scale, complex, wicked problems in front of us and of course, to plan and prepare for what may be coming our way.

- c) As the Director of Strategy & Transformation of Peel Region, how do you perceive the evolving economic landscape of the Greater Toronto Area, particularly with the emergence of sectors such as advanced manufacturing, technology, and finance? In your opinion, what role does Peel Region play in accommodating these economic shifts, and what opportunities do you see for the region to attract investment and nurture industry clusters within this changing economic context?

A: The economic landscape continues to shift at a rapid pace. New industries are being born every day. Governments all over the world are grappling with these changes, capitalizing on opportunities, and reconciling the challenges that these changes are bringing.

Peel's economy, like the rest of Ontario and Canada, continues to evolve and change. Goods movements, distribution and logistics, e-commerce are significant industries in Peel.

As Peel's economy continues to grow and transition, we will need to ensure that services and service delivery models adapt, transform, and evolve to best serve our residents and community. We have several strategies underway including advancing digital government & ensuring we attract and retain top talent for the future of work.

This concludes the interview process. Your valuable input is greatly appreciated. Thank you for sharing your insights!

Bibliography

- Addie, J.-P. (2016). Governing the Networked Metropolis: The Regionalization of Urban Transportation in Southern Ontario. In *Governing Cities Through Regions Canadian and European Perspectives* (pp. 121–141). Wilfrid Laurier University Press.
- Alter, L. (2022). *Plan to Build 15-Minute City for 80,000 People Wins Design Award*. Treehugger. <https://www.treehugger.com/plan-build-15-minute-city-wins-design-award-6754866>
- Bank of Canada. (n.d.). *A history of the key interest rate*. [Www.bankofcanada.ca. https://www.bankofcanada.ca/core-functions/monetary-policy/key-interest-rate/history-key-interest-rate/](https://www.bankofcanada.ca/core-functions/monetary-policy/key-interest-rate/history-key-interest-rate/)
- Bascaramurty, D., Rana, U., & Bhatt, N. (2021). In India and Canada’s international student recruiting machine, opportunity turns into grief and exploitation. *The Globe and Mail*. <https://www.theglobeandmail.com/canada/article-india-canada-international-student-recruitment/>
- Battams, N. (2022). Sharing a Roof: Multigenerational Homes in Canada. The Vanier Institute of the Family. <https://vanierinstitute.ca/resource/sharing-a-roof-multigenerational-homes-in-canada-2021-census-update/>
- Belina, B., & Lehrer, U. (2016). The Global City-Region: A Constantly Emerging Scalar Fix. In *Governing Cities Through Regions Canadian and European Perspectives* (pp. 83–97). Wilfrid Laurier University Press.
- Biglieri, S., & Keil, R. (2024). Desynchronized Infrastructures of Care: Suburban Imaginaries Re- Examined. In *Infrastructural Times Temporality and the Making of Global Urban Worlds* (pp. 227–248). Bristol University Press.
- Boothby, L. (2024). *Citizens are abandoned and angry’: Public speakers distrustful of Edmonton district planning*. Edmonton Journal. <https://edmontonjournal.com/news/local-news/edmonton-district-planning-sparks-distrust-from-speakers>
- Bozikovic, A. (2024). A task force’s bold prescription: a Canada of 15-minute cities. *The Globe and Mail*. <https://www.theglobeandmail.com/canada/article-a-task-forces-bold-prescription-a-canada-of-15-minute-cities/>
- Bozikovic, A., Case, C., Lorinc, J., & Vaughan, A. (2019). *House Divided*. Coach House Books.
- Bristow, G. (2018) New Regionalism, In: Anssi Paasi, John Harrison, Martin Jones (eds.) *Handbook on the Geographies of Regions and Territories*. Edward Elgar: Cheltenham, UK.
- Brunet-Jailly, E., & Arcand, E. (2016). Provincial Distrust Weighs on Vancouver’s Regional Governance. In Keil, R., Hamel, P., Boudreau, J.-A., & Kipfer, S. (Eds.). *Governing Cities Through Regions: Canadian and European Perspectives*. Wilfrid Laurier Univ. Press.

Buliung, R. (2023). *The 15-minute city is a popular planning approach, but relies on ableist assumptions*. Building. <https://building.ca/feature/the-15-minute-city-is-a-popular-planning-approach-but-relies-on-ableist-assumptions/>

Büttner, B., Silva, C., Teixeira, J., Papa, E., & Cao, M. (2024). *Mapping of 15-minute City Practices: Overview on strategies, policies and implementation in Europe and beyond*. Driving Urban Transitions (DUT).

Callan, I., & D'Mello, C. (2023). *Legislation to reverse Greenbelt removals passes 3rd reading, set to become law* | Globalnews.ca. Global News. <https://globalnews.ca/news/10149566/ontario-greenbelt-reversal-bill/>

Canseco, M. (2023). *Most Canadians Oblivious to the “15-Minute City” Concept*. Research Co. <https://researchco.ca/2023/03/31/15-minute-city-canada/>

Capasso Da Silva, D., King, D. A., & Lemar, S. (2019). Accessibility in Practice: 20-Minute City as a Sustainability Planning Goal. *Sustainability*, 12(1), 129. <https://doi.org/10.3390/su12010129>

Casey, L. (2023). *18 MZOs given to developers who were guests at Premier Ford's family wedding: NDP*. CP24. <https://www.cp24.com/news/18-mzos-given-to-developers-who-were-guests-at-premier-ford-s-family-wedding-ndp-1.6623006?cache=y%2F7.541075>

Cats, O., & Birch, N. (2021). Multi-modal network evolution in polycentric regions. *Journal of Transport Geography*, 96, 103159. <https://doi.org/10.1016/j.jtrangeo.2021.103159>

City Institute. (2023). *Peeling back the layers: Dissolution, social impacts and inequities in Peel Region*. The City Institute at York University (CITY). <https://www.yorku.ca/cityinstitute/events/peeling-back-the-layers-dissolution-social-impacts-and-inequities-in-peel-region/>

City of Brampton. (n.d.). *Vision for 20-minute Walkable Neighbourhoods*. www.brampton.ca. <https://www.brampton.ca/EN/Business/planning-development/projects-studies/Queen-Street-East-Precinct-Plan/Pages/Walkable-Neighbourhoods.aspx>

City of Brampton. (2019). *Preliminary Queen Street East Precinct Plan and Community Planning Permit System*.

City of Markham. (2014). *Official Plan Chapter 7: Transportation, Services and Utilities*.

City of Markham. (2024). *Current Development Charge Rates*. City of Markham.

City of Pickering. (2024). *Purpose of the Treasurer's Statement Payment of Development Charges Development Charges*. <https://www.pickering.ca/en/city-hall/resources/developmentcharges2023-2024.pdf>

City of Toronto. (2012). 2011 Census: Population and Dwelling Counts. In *2011 Census: Population and Dwelling Counts*. <https://www.toronto.ca/wp-content/uploads/2017/10/9726-2011-Census-Backgrounder-Population-Dwelling.pdf>

City of Toronto. (2017). *Downsview Area Secondary Plan*.

City of Toronto. (2023). *PROPOSED REDEVELOPMENT OF THE DOWNSVIEW LANDS*.

City of Toronto. (2023b). *Mall Redevelopment Tracker*. City of Toronto. <https://www.toronto.ca/city-government/planning-development/official-plan-guidelines/design-guidelines/mall-redevelopment-guide/>

City of Toronto. (2024). *Development Charge Rates*. Bylaws, Rates & Study. <https://www.toronto.ca/wp-content/uploads/2024/06/8fc1-DC-Rates-Effective-June-6-2024-for-web.pdf>

City of Toronto. (2021). *Mall Redevelopment Guide*.

City of Vaughan. (2024). *Development Charge Rates and By-Laws*. City of Vaughan.

Cladera, J., Marmolejo Duarte, C. R., & Moix, M. (2009). Urban Structure and Polycentrism: Towards a Redefinition of the Sub-centre Concept. *Urban Studies*, 46(13), 2841–2868. <https://doi.org/10.1177/0042098009346329>

Cole, H. V. S., Mehdipanah, R., Gullón, P., & Triguero-Mas, M. (2021). Breaking down and Building Up: Gentrification, Its drivers, and Urban Health Inequality. *Current Environmental Health Reports*, 8(8). <https://doi.org/10.1007/s40572-021-00309-5>

Copus, A. K. (2001). From Core-periphery to Polycentric Development: Concepts of Spatial and Aspatial Peripherality. *European Planning Studies*, 9(4), 539–552. <https://doi.org/10.1080/09654310120049899>

Cox, K. (2010). The Problem of Metropolitan Governance and the Politics of Scale. *Regional Studies*, 44(2), 215–227. <https://doi.org/10.1080/00343400903365128>

D’Acci, L. (2013). Simulating future societies in Isobenefit Cities: Social isobenefit scenarios. *Futures*, 54, 3–18. <https://doi.org/10.1016/j.futures.2013.09.004>

Dachis, B. (2010). *Picking up Savings: The Benefits of Competition in Municipal Waste Services*. C.D. Howe Institute NO.308.

de Leániz, C. L. G., & Lobo, A. F. (2023). 15-Minute City: Utopia or reality? *Transportation Research Procedia*, 71, 203–210. <https://doi.org/10.1016/j.trpro.2023.11.076>

DeClerq, K. (2023). *Ontario reversing decision to dissolve Peel Region*. Toronto. <https://toronto.ctvnews.ca/ontario-reversing-decision-to-dissolve-peel-region-1.6685544>

- Derudder, B., Liu, X., Wang, M., Zhang, W., Wu, K., & Caset, F. (2021). Measuring polycentric urban development: The importance of accurately determining the “balance” between “centers.” *Cities, III*, 103009. <https://doi.org/10.1016/j.cities.2020.103009>
- Draaisma, M. (2024). *Ford government uses MZO to speed up Ontario Place development*. CBC. <https://www.cbc.ca/news/canada/toronto/ontario-enhanced-ministers-zoning-order-ontario-place-1.7208467>
- Duggal, S. (2024). *Majority of Ontarians don't think Ford government is “For The People”*: poll. OrilliaMatters.com. <https://www.orilliamatters.com/local-news/majority-of-ontarians-dont-think-ford-government-is-for-the-people-poll-8325933>
- Duquet, B., & Brunelle, C. (2020). Subcentres as Destinations: Job Decentralization, Polycentricity, and the Sustainability of Commuting Patterns in Canadian Metropolitan Areas, 1996–2016. *Sustainability, 12*(23), 9966. <https://doi.org/10.3390/su12239966>
- Ekers, M., Hamel, P., & Keil, R. (2012). Governing Suburbia: Modalities and Mechanisms of Suburban Governance. *Regional Studies, 46*(3), 405–422. <https://doi.org/10.1080/00343404.2012.658036>
- Fanelli, C. (2016). *Megacity Malaise*. Fernwood Publishing.
- Ferguson, M., Lavery, T., & Higgins, C. (2014). Truck Freight Generators & Attractors in the Province of Ontario. *McMaster Institute for Transportation and Logistics*.
- wouden, P. (2018). The Morphology of Dispersed Suburbanism: The Land-use Patterns of the Dominant North American Urban Form. In *The Suburban Land Question: A Global Survey* (pp. 122–144). University of Toronto Press.
- Frank, L. D., & Engelke, P. O. (2001). The Built Environment and Human Activity Patterns: Exploring the Impacts of Urban Form on Public Health. *Journal of Planning Literature, 16*(2), 202–218. <https://doi.org/10.1177/08854120122093339>
- Friskén, F. (2007). *The public metropolis: the political dynamics of urban expansion in the Toronto region, 1924-2003*. Canadian Scholars' Press.
- Gao, D., Li, G., & Li, Y. (2021). Government cooperation, market integration, and energy efficiency in urban agglomerations—Based on the quasi-natural experiment of the Yangtze River Delta Urban Economic Coordination Committee. *Energy & Environment, 33*(8), 0958305X2110474. <https://doi.org/10.1177/0958305x211047480>
- Georgieva, K. (2023). Debunking the 15-minute-city conspiracy theory — and why it erupted at essex county council. *CBC.ca*. <https://www.cbc.ca/news/canada/windsor/15-minute-city-conspiracy-theory-essex-county-council-1.6808005>

- Geva, Y., & Siemiatycki, M. (2023). Finding Mutual Benefit in Urban Development. *Journal of the American Planning Association*, 90(1), 1–15. <https://doi.org/10.1080/01944363.2023.2170908>
- Glass, M. R. (2018). Navigating the regionalism–public choice divide in regional studies. *Regional Studies*, 52(8), 1150–1161. <https://doi.org/10.1080/00343404.2017.1415430>
- Glover, C., & Draaisma, M. (2022). *Mayor Bonnie Crombie renews call for Mississauga to separate from Peel Region*. CBC. <https://www.cbc.ca/news/canada/toronto/bonnie-crombie-mississauga-mayor-call-for-separation-peel-region-1.6612230>
- Gongadze, S., & Maassen, A. (2023). *Paris’ Vision for a “15-Minute City” Sparks a Global Movement*. World Resources Institute. <https://www.wri.org/insights/paris-15-minute-city>
- Graus, P., Freestone, R., & Simon, S. (2024). *Catalog* (pp. 16–18). Jovis.
- Grunfelder, J., Nielsen, T. A. S., & Groth, N. B. (2015). Changes to urban form and commuting patterns: trends in two Danish city regions. *Geografisk Tidsskrift-Danish Journal of Geography*, 115(2), 73–87. <https://doi.org/10.1080/00167223.2015.1060864>
- Harris, R. (2015). Using Toronto to Explore Three Suburban Stereotypes, and Vice Versa. *Environment and Planning A: Economy and Space*, 47(1), 30–49. <https://doi.org/10.1068/a46298>
- Harrison, L. (2023). *Bonnie Crombie wins Ontario Liberal leadership race, says party focused on beating Doug Ford*. CBC. <https://www.cbc.ca/news/canada/toronto/ontario-liberals-announce-new-leader-1.7047338>
- Hernandez-Morales, A. (2022). *The promise of the 15-minute city*. POLITICO. <https://www.politico.eu/article/what-the-city-of-the-future-borrows-from-the-past/>
- Hogue, R. (2023). *HOUSING TRENDS AND AFFORDABILITY: High rates and prices make it less affordable to own a home in Canada*. RBC.
- Hollman, S., & The Region of Peel. (2023). *Principles to Maintain Regional Service through the Transition Period and Prepare for 2024 Budget*.
- Howarth, R. (2011). *Service Delivery Collaboration in Non-profit Health and Community Services: What Does Government Want?* Wellesley Institute.
- Jackson, J. (2023). *What is the 15-minute cities conspiracy theory?* The Bureau of Investigative Journalism. <https://www.thebureauinvestigates.com/stories/2023-10-04/what-is-the-15-minute-cities-conspiracy-theory/>
- Jia, N., & Zhong, H. (2022). The Causes and Consequences of China’s Municipal Amalgamations: Evidence from Population Redistribution. *China & World Economy*, 30(4), 174–200.

Jones, A., & Casey, L. (2023). *Bonnie Crombie wins Ontario Liberal leadership after 3 rounds of voting*. Toronto. <https://toronto.ctvnews.ca/bonnie-crombie-wins-ontario-liberal-leadership-after-3-rounds-of-voting-1.6670685>

Joy, M., & Vogel, R. K. (2015). Toronto's governance crisis: A global city under pressure. *Cities*, 49, 35–52. <https://doi.org/10.1016/j.cities.2015.06.009>

Keil, R., & Addie, J.-P. (2016). Internalized Globalization and Regional Governance in the Toronto Region. In *Governing Cities Through Regions: Canadian and European Perspectives*. Wilfrid Laurier University Press.

Keil, R., & Ucoglu, M. (2022). Beyond Sprawl? Regulating Growth in Southern Ontario: Spotlight on Brampton. *DisP - the Planning Review*, 57(3), 100–118. <https://doi.org/10.1080/02513625.2021.2026678>

Keil, R., & Young, D. (2009). The In-between City. In *Changing Toronto: Governing Urban Neoliberalism* (pp. 119–140). University of Toronto Press.

Khavarian-Garmsir, A. R., Sharifi, A., & Sadeghi, A. (2023). The 15-minute city: Urban planning and design efforts toward creating sustainable neighborhoods. *Cities*, 132(132), 104101. <https://doi.org/10.1016/j.cities.2022.104101>

Kitawi, K., & OALA. (n.d.). *Brampton's 20-Minute Walkable Neighbourhood*. The Ontario Association of Landscape Architects. <https://www.oala.ca/ground-53-bramptons-20-minute-walkable-neighbourhood>

Knight, J., Weaver, R., & Jones, P. (2018). Walkable and resurgent for whom? The uneven geographies of walkability in Buffalo, NY. *Applied Geography*, 92, 1–11. <https://doi.org/10.1016/j.apgeog.2018.01.008>

Krishendeholl, A., & Béland, D. (2023). *Non-profits were tested by COVID-19 but proved resilient*. Policy Options. <https://policyoptions.irpp.org/magazines/january-2023/nonprofit-covid-racism-test/>

Krishendeholl, A., Sotomayor, L., & Keil, R. (2024). *Demanding participation and transparent policymaking in urban Ontario*. [www.linkedin.com](https://www.linkedin.com/pulse/demanding-participation-transparent-0hl7c/?trackingId=ViF303Cl9XEamr9%2FumKfMg%3D%3D). <https://www.linkedin.com/pulse/demanding-participation-transparent-0hl7c/?trackingId=ViF303Cl9XEamr9%2FumKfMg%3D%3D>

Kwon, K., & Seo, M. (2018). Does the Polycentric Urban Region Contribute to Economic Performance? The Case of Korea. *Sustainability*, 10(11), 4157. <https://doi.org/10.3390/su10114157>

Lambregts, B. (2006). Polycentrism: Boon or Barrier to Metropolitan Competitiveness? The Case of the Randstad Holland. *Built Environment*, 32(2), 114–123. <https://doi.org/10.2148/benv.32.2.114>

- Li, X., Mou, Y., Wang, H., Yin, C., & He, Q. (2018). How Does Polycentric Urban Form Affect Urban Commuting? Quantitative Measurement Using Geographical Big Data of 100 Cities in China. *Sustainability*, 10(12), 4566. <https://doi.org/10.3390/su10124566>
- Li, Y., & Liu, X. (2018). How did urban polycentricity and dispersion affect economic productivity? A case study of 306 Chinese cities. *Landscape and Urban Planning*, 173, 51–59. <https://doi.org/10.1016/j.landurbplan.2018.01.007>
- Lin, D., Allan, A., & Cui, J. (2015). The impact of polycentric urban development on commuting behaviour in urban China: Evidence from four sub-centres of Beijing. *Habitat International*, 50, 195–205. <https://doi.org/10.1016/j.habitatint.2015.08.018>
- Lindsey, R. (2008). Prospects for Urban Road Pricing in Canada. *Project Muse (Johns Hopkins University)*, 2008(1), 235–293. <https://doi.org/10.1353/urb.2008.a249793>
- Logan, J. R., & Molotch, H. (1987). *Urban fortunes the political economy of place*. University Of California Press.
- Lorinc, J. (2023). *LORINC: Is the 15-minute city's 15 minutes up yet?* Spacing Toronto. <https://spacing.ca/toronto/2023/03/10/lorinc-is-the-15-minute-citys-15-minutes-up-yet/>
- Luo, X., & Shen, J. (2009). A study on inter-city cooperation in the Yangtze river delta region, China. *Habitat International*, 33, 52–62. <https://doi.org/10.1016/j.habitatint.2008.04.002>
- Lv, Y., Zheng, X., Zhou, L., & Zhang, L. (2017). Decentralization and Polycentricity: Spatial Changes of Employment in Beijing Metropolitan Area, China. *Sustainability*, 9(10), 1880. <https://doi.org/10.3390/su9101880>
- MacDermid R. (2009) *Funding City Politics*. The CSJ Foundation for Research and Education, Centre for Social Justice and Vote Toronto, Toronto, ON.
- Manning, L. (2024). *Neoliberalism: What It Is, With Examples and Pros and Cons*. Investopedia. <https://www.investopedia.com/terms/n/neoliberalism.asp#toc-characteristics-of-neoliberalism>
- McGary, H. (2004). The new conservatism and the critique of equity planning. *Philosophy & Geography*, 7(1), 79–93. <https://doi.org/10.1080/1090377042000196038>
- McNeil, N. (2011). Bikeability and the 20-min Neighborhood. *Transportation Research Record: Journal of the Transportation Research Board*, 2247(1), 53–63. <https://doi.org/10.3141/2247-07>
- Meagher, S. (2024). *Study uncovers \$868 Million Annual Shortfall in Provincial Funding for Peel*. Businesswire.com. <https://www.businesswire.com/news/home/20240523257581/en/Study-uncovers-868-Million-Annual-Shortfall-in-Provincial-Funding-for-Peel>
- Metamorphosis. (2024). *About*. Community Metamorphosis. <https://communitymetamorphosis.org/About/>

Metamorphosis. (2024b). *Provincial Funding for Social Services in Peel Region*.

Moreno, C. (2024). *The 15-Minute City: A solution to saving our time & our planet*.

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>

Mulíček, O., Osman, R., & Seidenglanz, D. (2014). Urban rhythms: A chronotopic approach to urban timespace. *Time & Society*, 24(3), 304–325. <https://doi.org/10.1177/0961463x14535905>

Musterd, S., Marcińczak, S., van Ham, M., & Tammaru, T. (2016). Socioeconomic segregation in European capital cities. Increasing separation between poor and rich. *Urban Geography*, 38(7), 1062–1083.

Nasser, S. (2020). *Brampton has emerged as one of Ontario's COVID-19 hotspots, but experts urge caution on where to lay blame*. CBC. <https://www.cbc.ca/news/canada/toronto/brampton-coronavirus-covid-19-south-asian-1.5723330>

Northcrest Development. (2024). *The Downsview Opportunity*. Northcrestdev.ca. <https://www.northcrestdev.ca/the-downsview-opportunity>

Office of the Auditor General of Ontario. (2023). *Operation of the Environmental Bill of Rights, 1993*.

Ontario - Yours to Protect. (2024). *Minister's Zoning Order Map*. Ontario - Yours to Protect. <https://yourstoprotect.ca/ministers-zoning-order-map/>

OPPI. (n.d.). *About Planning | OPPI*. Ontarioplanners.ca. <https://ontarioplanners.ca/oppi/about-oppi/about-planning#WHAT%20DOES%20AN%20RPP%20DO>

Peck, J. (2011). Neoliberal Suburbanism: Frontier Space. *Urban Geography*, 32(6), 884–919. <https://doi.org/10.2747/0272-3638.32.6.884>

Perrott, K. (2020). Does New Urbanism “Just Show Up”? Deliberate Process and the Evolving Plan for Markham Centre. *Urban Planning*, 5(4), 388–403. <https://doi.org/10.17645/up.v5i4.3543>

Peterson, J. (2022). *The idea that neighborhoods should be walkable is lovely. The idea that idiot tyrannical bureaucrats can decide by fiat where you're "allowed" to drive is perhaps the worst imaginable perversion of that idea--and, make no mistake, it's part of a well-documented plan*. [Tweet]. X (formerly Twitter). <https://x.com/jordanbpeterson/status/1609255646993457153>

Powers, L. (2024). *Ford doubles down on refusal to allow fourplexes provincewide*. CBC.ca. <https://www.cbc.ca/news/canada/toronto/ford-fourplexes-infrastructure-funding-1.7162251>

Province of Ontario. (2023). *Planning Act, R.S.O. 1990, c. P.13*. Ontario.ca. <https://www.ontario.ca/laws/statute/90p13>

Reddekopp, L., Bowden, O., & Sasitharan, K. (2023). *Mississauga Mayor Bonnie Crombie takes aim at Ford government as she eyes Liberal leadership*. CBC. <https://www.cbc.ca/news/canada/toronto/crombie-liberal-leadership-bid-1.6851350>

Reid, C. (2023). *15-Minute-City Conspiracy Theories Insane Says 15-Minute-City Creator*. Forbes. <https://www.forbes.com/sites/carltonreid/2023/02/08/15-minute-city-conspiracy-theories-insane-says-15-minute-city-creator/>

Ren, Y., Shen, L., Wang, J., & Wu, Y. (2021). How to address properly the scale of urban infrastructures? –An empirical study of 35 large Chinese cities. *Habitat International*, 118, 102464. <https://doi.org/10.1016/j.habitatint.2021.102464>

Ritsema Van Eck, J., & Van Der Wouden, R. (2020). Randstad: spatial planning, polycentrism and urban networks. In *The Randstad: A Polycentric Metropolis* (Vol. 32, Issue 2, pp. 114–123). Routledge. <https://doi.org/10.2148/benv.32.2.114>

Senecal, G., & Reyburn, S. (2006). The NIMBY Syndrome and the Health of Communities. *Canadian Journal of Urban Research*, 15(2), 244–263.

Shanghai Municipal Bureau of Planning and Natural Resources. (2023). *SHANGHAI ACTION GUIDANCE OF 15-MINUTE COMMUNITY LIFE CIRCLE* (pp. 1–36).

Simone, A. (2016). Urbanity and Generic Blackness. *Theory Culture & Society*, 0(0), 1–21. <https://doi.org/10.1177/0263276416636203%20tcs.sagepub.com>

Sotomayor, L., Keil, R., Clarke, J., & Li, E. (2023). *Stretching the limits: Infrastructures of Care in Peel Region*.

Speck, J. (2012). *Walkable city: how downtown can save America, one step at a time*. North Point Press.

Spicer, Z. (2016). *Boundary Bargain: Growth, Development, and the Future of City-County Separation*. McGill-Queen's Press - MQUP.

Spicer, Z., & Found, A. (2016). Thinking Regionally: How to Improve Service Delivery in Canada's Cities. *C.D Howe Institute Commentary NO. 458*.

Statistics Canada. (2021). *Grandparents' Day, by the numbers*. [Www.statcan.gc.ca. https://www.statcan.gc.ca/o1/en/plus/4458-grandparents-day-numbers](https://www.statcan.gc.ca/o1/en/plus/4458-grandparents-day-numbers)

Sun, Y., Wang, Z., Yang, T., Zhang, B., & Wang, B. (2023). Polycentric cities and income polarization in China: Does city spatial structure matter? *Structural Change and Economic Dynamics*, 67, 380–387. <https://doi.org/10.1016/j.strueco.2023.09.007>

- Taylor, Z. (2022). Regionalism from above: intergovernmental relations in Canadian metropolitan governance. *Commonwealth Journal of Local Governance*, 26, 139–159. <https://doi.org/10.5130/cjlg.vi26.8141>
- The City of Mississauga. (2023a). *Peel transition*. City of Mississauga. <https://www.mississauga.ca/council/council-activities/council-advocacy/peel-transition/>
- The City of Mississauga. (2023b). *Mississauga will work with province on new plan for Peel dissolution*. City of Mississauga. <https://www.mississauga.ca/city-of-mississauga-news/news/mississauga-will-work-with-province-on-new-plan-for-peel-dissolution/>
- The Government of Ontario. (n.d.). *The Changing Shape of Ontario: Municipality of Metropolitan Toronto and the Regional Municipality of York*. www.archives.gov.on.ca. <https://www.archives.gov.on.ca/en/maps/counties/rm-york.aspx>
- The Government of Ontario. (2020). *A Place to Grow: Growth plan for the Greater Golden Horseshoe*. <https://files.ontario.ca/mmah-place-to-grow-office-consolidation-en-2020-08-28.pdf>
- The Government of Ontario. (2023). *Ontario Newsroom*. news.ontario.ca. <https://news.ontario.ca/en/release/1003064/ontario-announces-intent-to-dissolve-peel-region>
- The Government of Ontario. (2024). *Zoning order framework | ontario.ca*. www.ontario.ca. <https://www.ontario.ca/page/zoning-order-framework>
- The Region of Peel. (2021a). *Demographics*. data.peelregion.ca. <https://data.peelregion.ca/pages/demographics>
- The Region of Peel. (2021b). *Ethnic diversity and Religion 2021*. Census-Regionofpeel.hub.arcgis.com. <https://census-regionofpeel.hub.arcgis.com/pages/ethnic-diversity-and-religion-2021>
- The Region of Peel. (2021c). *Population and Dwelling Counts 2021*. Census-Regionofpeel.hub.arcgis.com. <https://census-regionofpeel.hub.arcgis.com/pages/population-and-dwellings-2021>
- The Region of Peel. (2023). *Municipal fiscal sustainability: Addressing municipal fiscal challenges* (pp. 1–3).
- Tomorrow City. (2020). *Paris, The 15-minute City*. Tomorrow City - the Biggest Platform about Urban Innovation. <https://www.tomorrow.city/paris-the-15-minute-city/>
- Ulloa-Leon, F., Correa-Parra, J., Vergara-Perucich, F., Cancino-Contreras, F., & Aguirre-Nuñez, C. (2023). “15-Minute City” and Elderly People: Thinking about Healthy Cities. *Smart Cities*, 6(2), 1043–1058. <https://doi.org/10.3390/smartcities6020050>
- Urban Toronto. (2020). *Northcrest Developments and Canada Lands Study Future of Downsview Airport Lands | UrbanToronto*. Urbantoronto.ca.

<https://urbantoronto.ca/news/2020/05/northcrest-developments-and-canada-lands-study-future-downsview-airport-lands.42309>

Urban Transportation Task Force - UTTF. (2012). *The High Cost of Congestion in Canadian Cities*.

Venugopal, R. (2015). Neoliberalism as concept. *Economy and Society*, 44(2), 165–187. <http://dx.doi.org/10.1080/03085147.2015.1013356>

Vohra-Miller, S., Brar, A., & Banerjee, A. (2020). “It’s not Diwali, it’s precarious employment and less health care resources.” *South Asian medical experts on Brampton’s rising COVID-19 cases*. Toronto Star. https://www.thestar.com/opinion/contributors/it-s-not-diwali-it-s-precarious-employment-and-less-health-care-resources-south-asian/article_9acfdcea-3e86-5f5a-8ef0-5a7faa58d187.html

Wainwright, O. (2023). In praise of the “15-minute city” – the mundane planning theory terrifying conspiracists. *The Guardian*. <https://www.theguardian.com/commentisfree/2023/feb/16/15-minute-city-planning-theory-conspiracists>

Wecke, I. (2021). *Conspiracy theories aside, there is something fishy about the Great Reset*. OpenDemocracy. <https://www.opendemocracy.net/en/oureconomy/conspiracy-theories-aside-there-something-fishy-about-great-reset/>

Weng, M., Ding, N., Li, J., Jin, X., Xiao, H., He, Z., & Su, S. (2019). The 15-minute walkable neighborhoods: Measurement, social inequalities and implications for building healthy communities in urban China. *Journal of Transport & Health*, 13, 259–273. <https://doi.org/10.1016/j.jth.2019.05.005>

White, R. (2016). *Planning Toronto: The Planners, The Plans, Their Legacies, 1940-80*. UBC Press.

Willsher, K. (2020). Paris mayor unveils ‘15-minute city’ plan in re-election campaign. *The Guardian*. <https://www.theguardian.com/world/2020/feb/07/paris-mayor-unveils-15-minute-city-plan-in-re-election-campaign>

Wood, D. (2007). To regionalize or not to regionalize? A study in the politics of policing in the Greater Vancouver Regional District. *Police Practice and Research*, 8(3), 283–297. <https://doi.org/10.1080/15614260701450781>

Woudsma, C., & Jakubicek, P. (2019). Logistics land use patterns in metropolitan Canada. *Journal of Transport Geography*, 88. <https://doi.org/10.1016/j.jtrangeo.2019.01.001>

Woudsma, C., Jakubicek, P., & Dablanc, L. (2016). Logistics Sprawl in North America: Methodological Issues and a Case Study in Toronto. *Transportation Research Procedia*, 12, 474–488. <https://doi.org/10.1016/j.trpro.2016.02.081>

Wu, F. (2018). “From ‘state-owned’ to ‘City Inc.’: the re-territorialization of the state in Shanghai.” In X. Ren & R. Keil (Eds.), *The Globalizing Cities Reader* (pp. 116–122). Routledge.

Zhang, M. (2006). Travel Choice with No Alternative Can Land Use Reduce Automobile Dependence? *Journal of Planning Education and Research*, 25, 311–326.

<https://doi.org/10.1177/0739456X05280544>

Zhang, W., Derudder, B., Liu, X., Viboon Tangwarodomnukun, & Wang, Y. (2021). Defining “centres” in analyses of polycentric urban regions: the case of the Yangtze River Delta. *Regional Studies*, 56(1), 87–98. <https://doi.org/10.1080/00343404.2021.1912725>