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Editorial

Planning and the High-Rise Neighbourhood: Debates on Vertical Cities

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Abstract
This editorial introduces the thematic issue on "Vertical Cities: The Development of High-Rise Neighbourhoods." It outlines the lack of understanding about high-rise development in cities around the world and argues for a continued need to further interrogate concepts of verticality beyond single towers and towards a finer grain examination of high-rise neighbourhoods. The editorial introduces four interconnected themes that begin to address this phenomenon—socio-demographic challenges, planning discourses, high-rise legacies, and alternative conceptions of verticality—and highlights how the various articles in this thematic issue explore these critical areas of enquiry. It concludes with a call for future research to delve deeper into the planning challenges presented by high-rise neighbourhoods in the 21st-century city and, critically, the contribution that high-rise urban form makes to urban sustainability.

Keywords
high-rise; neighbourhoods; planning; vertical cities

Issue
This editorial is part of the issue "Vertical Cities: The Development of High-Rise Neighbourhoods" edited by Brian Webb (Cardiff University) and James T. White (University of Glasgow).

1. Introduction

High-rise neighbourhoods, comprising clusters of multi-storey tower blocks, are now ubiquitous in the urban landscape of many cities around the world (White & Serin, 2021). The planning, design, and development of these vertical neighbourhoods is the result of numerous forces, including political discourses (Appert & Montes, 2015; Charney, 2007), demographic change (Lehrer & Wieditz, 2009; Rosen & Walks, 2015; Webb & Webber, 2017), migration (Costello, 2005; Lehrer et al., 2010; Rosen, 2017), global flows of finance (Craggs, 2018; Nethercote, 2018), sustainable policies that favour density and urban intensification (Fincher, 2004; Rosen, 2017; Searle & Filion, 2011), changing real estate markets (Choi et al., 2012; Kern, 2007; Sorensen et al., 2010), and the global flow of "sustainable" urban policies between cities (Khirfan & Jaffer, 2014; Ponzini, 2020; White & Punter, 2017). The impacts of these towering neighbourhoods on urban areas are multiple and diverse, ranging from gentrification and potential demographic homogeneity (Craggs, 2018; Lee, 2018; Lehrer et al., 2010; Moos, 2016; Nethercote, 2019; Rosen & Walks, 2015; Troy, 2018), to amenity provision (Costello, 2005; Fincher, 2004), visual impacts on the streetscape and skyline (Nijhuis & Van der Hoeven, 2018), and building lifecycle and governance concerns (Dredge & Coiacetto, 2011; Easthope & Randolph, 2016; Webb & Webber, 2017).

Urban planners play a key role, not only in facilitating the design and development of these new vertical neighbourhoods but also in addressing and managing their variegated impacts on the built environment and the residents that live in and around them. There is, therefore, a need to problematise the socio-demographic issues present within vertical neighbourhoods, closely examine the planning processes that frame high-rise interventions in the built environment, examine how recent and historic decisions on the form, typology,

location, and tenure of high-rise buildings and neighbourhoods impacts present day outcomes, as well as question the way verticality is understood in practice. This thematic issue seeks to advance these debates by drawing together articles exploring four key themes: socio-demographic challenges, planning discourses, high-rise legacies, and alternative conceptions of verticality.

2. Socio-Demographic Challenges

Debates on vertical urbanisation have too often focused on the role of urban elites, middle and high-income purchasers, and real estate investors as the drivers of high-rise development. Yet, as Easthope et al.'s (2022) article argues, there is a necessity to recognise and plan for the needs of lower-income households in high-rise neighbourhoods. Drawing on a case study in Sydney, Australia, their article highlights the ways in which coordinated and collaborative planning processes can positively ensure the needs of lower-income households are met in high-rise developments, while also emphasising how divergent political and market contexts can lead to different design and amenity outcomes for lower-income residents. Political and market factors are also at play in Grisdale and Walks' (2022) article, which explores how "condoization" has transformed Toronto's housing market and led to considerable structural changes in the rental market for high-rise apartments in the city. They argue that accepted conceptualizations of gentrification—as being driven by owner-occupied investment—need to be reconsidered given the socio-demographic composition of renters in gentrifying areas of the city. Critical perspectives on who occupies high-rise neighbourhoods is also the focus of Karsten's (2022) article, which advocates for new ways of thinking about inclusive vertical family housing. The article unpacks the "uneasy" relationship between young families and vertical living, focusing on the ways in which children have often been neglected in the planning and design of high-rise neighbourhoods. Yet, families have not stayed away from living in towers and, as Karsten argues, local governing authorities must acknowledge and better provide for this often-overlooked demographic. More research is needed on this topic, and as planning policy starts to catch up (e.g., City of Toronto, 2020), it must also confront wider socio-economic forces that define new high-rise neighbourhoods as exclusive enclaves for young, childless renters.

3. Planning Discourses

The practice of urban planning cannot be detached from the wider socio-political context in which it takes place. Issues of governance regularly arise in contemporary planning processes as decision-makers, developers, residents, and other stakeholders engage in debates about the future of the built environment. High-rises, perhaps more than other forms of urban development, elicit strong reactions from all involved. As Herburger et al. (2022) highlight in their article exploring planning committees in Austria, Switzerland, and Germany, demands for and opposition against high-rise development have necessitated the creation of new governance processes. Their work offers particular insights on the ways in which the structural organisation of various planning committees, and their functions, act as state-led means of managing vertical urbanisation. Cerrada Morato's (2022) article delves deeper into the policy framework of Tower Hamlets in Greater London and the agency of planners within high-rise development processes. Cerrada Morato explores the influence of three planning policies designed to shape the outcomes of new vertical neighbourhoods and provides insights from planners on the effectiveness of these policies. The multi-scalar nature of planning policy within Greater London was found to constrain local planners' abilities to effectively influence the development of high-rise neighbourhoods as envisioned in policy. Along with London, the politics of vertical construction in Paris and Vienna are explored in Glauser's (2022) article through a "glocal" lens. Here the city-specific patterns of vertical development are identified as reflecting the precise urban politics present in each city, which define what is acceptable and what is to be rejected. The unique discourses present in each city frame the way high-rise developments are viewed and offer important lessons for comparative urban governance and planning-focused research on vertical urbanisation.

4. High-Rise Legacies

Many cities are experiencing a 21st-century revival of high-rise development but contemporary discourses on vertical urbanisation cannot be disconnected from the past. Altrock's (2022) article confronts the long-established criticisms of mid-20th-century modernist high-rise development and reveals how this has influenced the design of contemporary projects in Germany. The "reconciliation" process between modern and post-modern urban design principles is used to explain the rise of "hybrid" ensemble urbanism in Germany and its relationship with wider global processes of vertical urbanisation. High-rise legacies not only influence current debates on the suitability of new towers, but they also present real challenges that impact how existing vertical neighbourhoods change (or do not change) to meet the contemporary demands of their owners/residents and the wider city. Hirai's (2022) exploration of "double ageing" addresses this legacy of high-rise development as he identifies the linked concerns of demographic ageing (residents) and physical ageing (high-rise towers). His article explores the considerable scale of double ageing in Tokyo's older high-rise developments and outlines the urgent need to address the growing generation gap between younger and older residents. The design and renovation of older high-rise developments also has implications for wider real estate

markets and consumer preferences, as identified in Egedy et al.'s (2022) article. A former industrial district in Budapest is used to explore how the planning, architecture, and revitalisation of diverse post-war housing estates have impacted the housing market in different ways. While variations in desirability were found, the authors note how early socialist priorities articulated in the initial designs of structural attributes, neighbourhood characteristics, and location—now reversed in a market economy—nevertheless remain important to understanding the function of local real estate markets.

5. Alternative Conceptions of Verticality

The final set of articles in this thematic issue challenges us to think slightly differently about verticality by exploring high-rise development from a more intimate perspective beyond the realms of urban planning, urban design, and real estate markets. Mechlenborg (2022) draws attention to the role of social spaces in high-rise developments and the link between home, culture, and shared space. Through 50 semi-structured interviews, Mechlenborg argues that greater attention should be given to individuals and their social interpretations of home within research on vertical neighbourhoods, highlighting that designers and developers should first think horizontally about the need for and function of common areas, support facilities and social spaces before expanding vertically. March and Lehrer (2022) continue this line of thought in their article by focusing on the role and importance of public spaces within high-rise buildings during the height of the Covid-19 pandemic. Here they pay particular attention to tenant struggles and how the use of public spaces collided with wider concerns about public safety and ultimately resulted in the emergence of new publics and socially-produced public spaces. Everyday vertical living is made visible here as they highlight the "grey areas of publicness" (March & Lehrer, 2022, p. 360) and its interaction with wider aspects of vertical governance, public policy, and collective action. In contrast to the interior public spaces of high-rise buildings, Jin (2022) unpacks ideas on the exterior vertical terrain as a way of re-conceptualising urban verticality beyond high-rise development. Drawing on a case study of Chongqing in China, the article examines how terrain influences the design and function of the city. Here the vertical landscape has resulted in different ways of navigating the city and informed new ways of developing high-rise buildings and infrastructure that work with the mountainous terrain. This has generated a "mundane everyday verticality" (Jin, 2022, p. 374) that might be foreign to those familiar with horizontal ways of thinking about cities and surrounding environments.

6. Conclusions

The articles contained in this thematic issue reveal the breadth and depth of research on high-rise buildings and neighbourhoods both as a historical and contemporary phenomenon shaped by capital, context, and community. The past decade or so has seen unprecedented high-rise residential development in cities the world over. Yet, with the global economy faltering in the wake of the Covid-19 pandemic and the ongoing war in Ukraine, the demand for new high-rise development is likely to slow as the cost of borrowing for developers, investors, and owner occupiers alike increases. This presents researchers with an opportunity to reflect further on the vertical city in the early 21st century and to critically assess whether this complex and often controversial phenomenon is a sustainable urban fix in global cities or one that has failed to heed the difficult lessons learnt from the development of modernist vertical urban form in the mid-20th century. This thematic issue provides a series of new and engaging foundations for these future scholarly pursuits.

Conflict of Interests

The authors declare no conflict of interests.

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Article

Planning for Lower-Income Households in Privately Developed High-Density Neighbourhoods in Sydney, Australia

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Abstract
In Australia, as in many other countries, private high-density housing is typically marketed as the domain of middle- and higher-income residents. But, in practice, it accommodates many lower-income households. These households often live in mixed-income communities alongside wealthier neighbours, but, because of constrained budgets, they rely more heavily on access to community services and facilities. This has implications for public infrastructure planning in high-density neighbourhoods where private property ownership dominates. In this article, we examine two neighbourhood case studies within the same local government area in Sydney that have sizable populations of lower-income households living in apartments, but which provide markedly different day-to-day experiences for residents. We consider the causes of these varying outcomes and implications for neighbourhood-scale planning and development. The article argues that coordinated and collaborative planning processes are key to ensuring that the needs of lower-income households are met in privately developed apartment neighbourhoods.

Keywords
apartment; condominium; density; housing development; low-income; Sydney; urban planning

Issue
This article is part of the issue "Vertical Cities: The Development of High-Rise Neighbourhoods" edited by Brian Webb (Cardiff University) and James T. White (University of Glasgow).

1. Introduction: Locating Lower-Income Apartment Residents in Private Apartment Buildings

Strategic urban plans commonly promote consolidation as a solution to population growth, affordability challenges, and unsustainable suburban sprawl (Bunker et al., 2017). In Australia, as in many other countries (including the UK, USA, Canada, and China), strategic planning policy has combined with market forces to produce rapid growth in private apartment developments delivered as condominiums (Easthope, 2019; Kern, 2014; Murphy, 2020; Troy et al., 2020). These developments are typically marketed to middle- and higher-income residents (Davidson & Lees, 2005; Fincher, 2004; Rosen & Walks, 2013). In practice, however, 36% of Australian households living in private apartments of four or more storeys are lower-income households (Australian Bureau of Statistics, 2016). Lower-income apartment households are defined as those with household incomes of less than $1,499 per week, in the bottom two quintiles of household income Australia-wide (Easthope, Crommelin, et al., 2020).

One reason for this is that few other options exist for lower-income households. Australia's small social housing sector (Groenhart, 2014) accommodates only 4.0% of all households (Australian Bureau of Statistics, 2016).

For most of the population, the only options available are owner-occupation or private rental, and apartments in urban areas generally cost less to rent or buy than standalone houses (Rosewall & Shoory, 2017). Australia also has a very small purpose-built institutional rental sector (Pawson & Milligan, 2013), meaning apartment buildings owned and rented by a single entity are uncommon. Most new apartment developments are delivered as speculative condominium developments (Troy et al., 2020).

Australia is not alone in housing a sizable population of lower-income residents in private apartment buildings. Notable examples include concentrations of lower-income households in private rental buildings across North America (Jones & Ley, 2016; Modlinska, 2021; Skaburskis & Nelson, 2014) and swathes of apartment buildings previously operating as social housing with ownership transferred to sitting tenants across Eastern Europe (Andrews & Sendi, 2001; Soaita, 2012). There are also many examples of lower-income residents room sharing and living in overcrowded conditions in private apartment buildings in cities around the world (Jayantha & Hui, 2012; Logan & Murdie, 2016; Mayson & Charlton, 2015).

While many previous studies on lower-income residents in private apartments have focused on areas with concentrations of lower-income residents, what makes the Australian case interesting internationally is the large number of lower-income private apartment residents living side-by-side with higher-income households, in the same buildings and neighbourhoods. This may be partly due to the tendency for Australian condominium buildings to include a mix of owner-occupiers and renters, as well as the geography of apartment development coinciding with the increasingly centralised industrial geography of Australian cities (Sigler et al., 2018).

There are examples of purposefully planned mixed-tenure apartment developments and neighbourhoods in Australia, including public housing estate renewal projects that incorporate a mix of social and private apartments (Arthurson, 2010) and situations where individual units within public housing buildings have been sold (Parliament NSW, 2005). However, our research (Easthope, Crommelin, et al., 2020) demonstrates that many mixed-income apartment neighbourhoods in Australia were not planned as such and have developed organically within fully private speculative developments. Mixed-income buildings and neighbourhoods might be mixed-income from the start or become increasingly mixed over time. These privately developed high-density and mixed-income neighbourhoods are the focus of this article.

Because of Australia's market-led housing delivery model, housing outcomes and public infrastructure provision in private mixed-income high-density neighbourhoods are highly varied in practice. In this article, we examine these variations through two neighbourhood case studies within the same local government area (LGA) in Sydney. Both have a sizable population of lower-income households living in apartments, but today provide markedly different outcomes for residents. In considering how neighbourhood-scale planning and development can affect the experiences of lower-income apartment residents, the case studies highlight two main issues: (a) planning processes and infrastructure provision, and (b) place management and community engagement.

The first case (Upper Strathfield) demonstrates how poor relationships between developers and government and a lack of coordinated strategic planning can negatively impact the provision of neighbourhood amenities and facilities. The second case (Rhodes West) demonstrates how coordinated and collaborative planning and urban design at the neighbourhood scale, underpinned by political will and appropriate resourcing, can deliver positive outcomes. Both cases also demonstrate that while planning plays a part, the impact of market dynamics on resident experiences is important.

We begin with a review of literature on lower-income households in private apartments and the importance of neighbourhood infrastructure provision. We then profile Australia's lower-income apartment residents and outline the study's research methods. The two cases are introduced, and the factors leading to different outcomes across the two neighbourhoods are discussed. We conclude by considering the role of planning and urban design in ensuring that the needs of lower-income households are met within privately developed high-density neighbourhoods. Through the case study analysis, we highlight the importance of coordinated and collaborative government intervention in property development processes, and the dangers of market-led housing delivery models. While a collaborative and coordinated planning process was achieved in a high-profile site (Rhodes West), a less attractive site in the same LGA was largely left to languish, demonstrating the uneven distribution of planning resources and controls for high-density development.

2. Research on Low-Income Residents in High-Density Settings

2.1. Lower-Income Households in Private High-Density Neighbourhoods

Much literature on private condominium development has focused on the role of international finance (Ley, 2017; Rogers & Koh, 2017), gentrification (Lehrer & Wieditz, 2009), privatisation (Kern, 2007; Rosen & Walks, 2013), exclusion (Atkinson et al., 2005), and luxury marketing (Costello, 2005; Raynor et al., 2017). This research demonstrates how condominium development is implicated in neoliberal agendas, particularly the increasing privatisation of cities. However, much of it implies or assumes that condominiums house wealthy residents or are left empty (Graham, 2015).

At the building scale, studies have focused on the diversity of households living within condominiums in Australia and internationally. This work has considered the needs of families with children (Easthope & Tice, 2011; Kerr et al., 2020; Nethercote & Horne, 2016) and ethnoculturally diverse households (Liu et al., 2018; Murdie, 2003; Noble, 2021). These works recognise that diverse household types can find themselves excluded in design and management decisions that result from market-led development and persistent cultural norms of a narrow resident profile (see also Fincher, 2004). Australian research has also demonstrated the inequitable impact of energy poverty on lower-income apartment residents (Cook et al., 2020). This work has played an important role in "opening up a more intimate, rich and imaginative understanding of the high-rise'' (Baxter, 2017, p. 4), but has largely focused on the building scale rather than the neighbourhood.

While there is literature that considers the needs of lower-income apartment residents at the neighbourhood level, it has primarily focused on areas of concentrated disadvantage, including areas of both social and private rental housing (e.g., Gifford, 2007; Kearns et al., 2012). Other than research addressing the displacement of lower-income residents from gentrifying neighbourhoods (e.g., Jones & Ley, 2016), little attention has been given to the needs of lower-income households living in mixed-income privately developed apartment neighbourhoods. There are notable exceptions, including Park's (2019) exploration of alternative rental systems catering to lower-income condominium residents in Korea, Forrest et al.'s (2002) research in Hong Kong, and Nguyen et al.'s (2020) research in Hanoi demonstrating the importance of neighbourhood planning and facilities for low-income high-rise apartment residents in mixed-income areas.

A larger body of literature focuses on neighbourhoods that have been planned as mixed-income and include some components of social housing (e.g., Arthurson, 2010). From a broad strategic perspective, mixed communities have the potential to reduce the stigma of lower-income households (Atkinson, 2008) and even reduce "threshold effects" of high concentrations of disadvantage (Galster, 2007). This literature offers important lessons on how the needs of lower-income high-density residents can be accommodated at the neighbourhood scale. For example, in the Melbourne neighbourhood of Carlton, Levin et al. (2014) found that developers' desire to mitigate the costs of subsidised affordable housing resulted in private open space being provided only for market-rate apartments, meaning affordable housing tenants relied on nearby public parks. This created unexpected burdens on public facilities. Although the "exposure to success" narrative of social mixing has long been criticised (Sarkissian, 1976), there is some literature that points to greater acceptance of diversity resulting from greater opportunities for interaction in shared spaces (Roberts, 2007), although this is also fraught with challenges (Lawton, 2013).

While this literature provides insights into best practices in purposeful planning for mixed-income and mixed-tenure communities, such neighbourhoods benefit from the involvement of social housing providers in the planning and delivery of services and facilities. This is typically not the case in private high-density neighbourhoods. In neighbourhoods where housing delivery is market-led and social housing providers are not involved, there is a clear risk that the needs of lower-income residents will be overlooked. Building upon the existing literature, this article addresses a gap in knowledge by concentrating on the needs and experiences of lower-income apartment residents in privately developed high-density neighbourhoods.

2.2. Importance of Public Infrastructure and Services for Lower-Income Residents

Neighbourhood facilities shape residents' everyday lives and their sense of belonging and well-being (Easthope, Crommelin, et al., 2020). Limited space within individual apartments can lead residents to rely more heavily on their local environments as extensions of their homes (Andrews & Warner, 2020). This is especially so for lower-income households where overcrowding is more likely (Nasreen & Ruming, 2021). While higher-income residents may have more diffuse networks and resources, neighbourhoods and neighbouring tend to be more important to poorer residents (Forrest & Kearns, 2001; Nguyen et al., 2020).

Neighbourhood features that influence apartment residents' experiences include parks, community spaces, schools, and childcare, as well as proximity to jobs, transport, retail, and services (Andrews & Warner, 2020). Walkability, traffic, safety, and lighting are also valued (Cook et al., 2020). Resident satisfaction in high-density neighbourhoods is dependent on the amount and quality of services and amenities (Allen, 2015). Yet, community infrastructure is often under-resourced or insufficient to cater for growing populations (Hendrigan et al., 2019). The presence of neighbourhood spaces where residents feel they belong and can connect with others helps overcome social isolation, improves mental well-being, and supports children's health and development (Andrews & Warner, 2020; Nguyen et al., 2020; Thompson, 2018).

While private apartment developments often provide facilities and amenities in individual buildings, these do not necessarily compensate for a lack of neighbourhood facilities. These facilities being accessible only to building residents can lead to social exclusion and segregation, much like the development of "gated communities" (Atkinson & Blandy, 2006; Nethercote, 2019; White & Serin, 2021). Facilities in private buildings are likely to increase the cost of living there (because of both perceived desirability and running costs), which can contribute to affordability pressures on lower-income people. This is true for both renters (indirectly through

higher rental costs) and owners (directly through contributions to common expenses).

3. Australia's Lower-Income Apartment Residents

Across Australia, incomes are generally lower and residents younger in apartment households compared to households in other dwellings (Australian Bureau of Statistics, 2016). Private apartments also have a higher proportion of renters than other dwellings (Easthope, Thompson, et al., 2020). Despite the dominant narrative of apartment residents being primarily middle-to-high-income households (Fincher, 2004), previous research has noted a significant representation of lower-income households in apartments compared to other dwelling types (Randolph & Sisson, 2020; Randolph & Tice, 2013).

The majority of lower-income apartment residents living in private apartments with four or more storeys are private renters (55%), although a sizable minority are owner-occupiers (31%; Australian Bureau of Statistics, 2016). This reflects the tenure breakdown in these properties overall, with more than half (59%) of all private apartments with four or more storeys in Australia being rental properties, compared with only a third (33%) being owner-occupied (the balance being empty properties, second homes, and short-term lets; Australian Bureau of Statistics, 2016). This can be explained in part by the absence of rental alternatives, and in part by generous tax breaks available to small-scale investor owners who often favour smaller properties and are more willing to buy units pre-completion (Nethercote, 2019; Sharam et al., 2015).

Compared to both higher-income apartment residents and households in other dwelling types, lower-income apartment residents are more likely to be born overseas, lone-person households, unemployed or not in the labour force, and renting (Easthope, Crommelin, et al., 2020, p. 2). These households also include people living with children (32% of lower-income high-density residents), owner-occupied households (31% of lower-income high-density residents), and Oceania-born residents (44% of lower-income high-density residents; see Easthope, Crommelin, et al., 2020, p. 2). This profile points towards a range of challenges in recognising and addressing the needs of residents in higher-density development.

4. Mixed Methodology for Understanding the Needs of Apartment Residents on Lower Incomes

The two case study locations were selected because of their high numbers of low-income apartment residents and their differing planning and development trajectories. Although in the same LGA, they have very different urban landscapes (one located between a rail line and a major road and the other on the waterfront). The two cases reveal different neighbourhood-scale planning and development processes and demonstrate the complex intersection between planning processes, property values, and public-private sector collaboration. The intention was to understand the effects that different neighbourhood-scale planning and development approaches had on the experiences of low-income apartment households. We anticipated that the selection of two case studies within the same LGA would enable deeper analysis of the case studies in their political context, while also facilitating comparison.

Table 1 provides an overview of resident demographics. Residents in Rhodes West are younger, tend to live in smaller households, and are better educated relative to New South Wales (NSW) and Australia. Asian ancestry is more common than European, and residents are less likely to drive to work or own their homes. While the proportion of lower-income households is similar to state averages, a high proportion of households are on high incomes, and the median personal income is also above the state average. Lower-income households are most commonly international students, young adults, and retirees (Easthope, Crommelin, et al., 2020).

Upper Strathfield's population is younger, better educated, and more likely to be of Asian ancestry relative to NSW and Australia as a whole. Residents are less likely to drive to work and more likely to rent. Households in Upper Strathfield are slightly larger, and the median personal income is lower than state averages. Median household incomes, however, are higher,

Table 1. Case study key statistics.

Location	Rhodes West	Upper Strathfield	NSW	Australia
Population	6,721	2,734	7,480,228	23,401,892
Dwellings owner-occupied (%)	33.6	27.5	64.4	65.5
Median age	28.8	28.5	38	38
Average number of people per household	2.4	2.9	2.6	2.6
Population born in Australia (%)	16.6	14.7	65.5	66.7
Population with bachelor's degree and above (%)	54.8	44.6	23.4	22.0
Median weekly personal income (A$)	754	587	664	662
Median weekly household income (A$)	1,712	1,679	1,486	1,438
Household income < $650 per week (%)	20.5	19.0	19.7	20.0

Source: Australian Bureau of Statistics (2016).

pointing to households comprised of multiple lower-income residents. Lower-income households are most commonly lower-income workers, young adults, and retirees (Easthope, Crommelin, et al., 2020).

The case study fieldwork was completed between April 2019 and February 2020. It comprised a review of relevant documentation, structured observations through a neighbourhood design audit, and interviews and focus groups with residents and governance stakeholders. The neighbourhood design audits for each area included daytime and night-time observations, an assessment of local services and facilities, and basic morphological analysis. Document reviews incorporated strategic planning policies, land-use and design controls, precinct designs and plans, housing targets, design guidelines, and media coverage.

In Upper Strathfield, a two-hour focus group with four residents was conducted in the evening in a nearby commercial centre. Recruitment was through a local letterbox drop, with participants screened as having low household incomes. The focus group was conducted with a translator present, to assist one resident with limited English.

In Rhodes, a two-hour focus group with three residents was held in the evening at a local community hall. Participants were recruited through their connection with a council-facilitated community liaison group. This provided valuable insights into the community consultation process but did not reflect the diversity of the community. To complement this focus group, nine intercept interviews (ranging from 10 to 20 minutes) were conducted at a local community fair. Intercept interviewees were not explicitly screened based on income, age, ethnicity, or tenure, but participants were recruited to ensure diversity across these characteristics.

In addition to residents, six other interviews were conducted with governance stakeholders (three local government, one state government, one planning consultant, and one community centre manager), relevant to both case studies (although the community centre was in Rhodes). These interviews considered how well apartment developments have provided for the needs of lower-income residents and how the process of delivering buildings and neighbourhoods unfolded in practice. Interviews also discussed the accessibility, provision, and quality of neighbourhood services and infrastructure. Resident and stakeholder interviews were transcribed, and transcripts were reviewed to identify key issues and themes.

Following the case study research, a workshop was conducted with a further six key stakeholders (two state government, two local government, one development manager, and one strata manager) to consider the implications of the case study findings for future policy and planning. Participants were active in the design, delivery, and management of apartment buildings and neighbourhoods across Sydney.

5. Introducing the Case Studies: Rhodes West and Upper Strathfield

Despite being in the same LGA (see Figure 1) and having both undergone large-scale redevelopment since the early 2000s, the case study neighbourhoods reflect

Figure 1. Case study locations.

contrasting planning outcomes. While Rhodes West was almost complete when the research was undertaken, development in Upper Strathfield had stalled, leaving numerous vacant lots and limited public amenities. This section begins with an overview of each neighbourhood, before discussing the key reasons for different outcomes between the two cases.

The neighbourhood of Rhodes West (Figure 2, top) is located on a narrow peninsula built upon reclaimed land. It has been transformed in the last 20 years, shifting from industrial to residential and commercial use. Although development densities are high by Australian standards, with several buildings over 20 storeys, Rhodes West benefits from a variety of public open spaces and water views that provide a sense of spaciousness. Most buildings maintain a positive connection with their streets providing a high level of passive surveillance. Wide roadways and footpaths ensure a comfortable scale in streets even where buildings are tall. However, the tall buildings cast shadows over the public realm and wind flows are higher in the neighbourhood than in surrounding areas. Footpaths are smooth and obstacle-free, and there are many places to sit. There was little traffic at the various times the research team visited. Buildings, streets,

Figure 2. Rhodes West (top) and Upper Strathfield (bottom). Source: Authors' work using Google Earth and GEOFABRIK.

and open spaces are well maintained, with few signs of disorder, litter, or graffiti. The foreshore open space (Figure 3) is heavily used for exercise and recreation. There are several playgrounds, a dog park, and a community garden, as well as cafes, restaurants, shops, and a multi-functional community facility.

Residents told us that the neighbourhood provided a high level of everyday amenities and was a quiet, attractive, and enjoyable place to live. The foreshore, community centre, and access to shops and trains were especially valued. A council interviewee noted that residents "love living in Rhodes" and have "a real sense of pride" in the neighbourhood (Canada Bay staff member). Residents affirmed this with one community member stating, "I think it is a good atmosphere to live in" (Rhodes resident 1). Another commented that there are "enough playgrounds…the riverside is beautiful and the shopping centre….I am very pleased" (Rhodes resident 2). Rhodes West was also valued for its perceived safety: "It feels safe you know? When you are walking home from the train station it is always busy at night, you don't walk alone in the dark" (Rhodes resident 8).

Upper Strathfield is separated from the rest of the LGA by the six-lane Parramatta Road and bounded to the south and west by railway lines (Figure 2, bottom). The Eastern portion is dominated by detached houses. The western portion has undergone significant change since the 2000s and now contains several apartment buildings of up to 10 storeys. Many original houses have been demolished for further apartment development; however, no development has occurred since new planning controls for the area came into effect in 2014. Approximately 1.2 hectares of land have been vacant since 2014 or earlier (Figure 4), giving the area a run-down feel, with low levels of passive surveillance. There is low-quality graffiti around the vacant lots, and street lighting is variable. There is a limited shade for pedestrians and no public seating or purposeful public open space. The apartment buildings to the north lack design coherence and provide little visual interest or activation at street level. Although Upper Strathfield is across the rail line from a commercial centre, pedestrian access involves passing through an unappealing underpass (Figure 5; for more detailed site descriptions, see Easthope, Crommelin, et al., 2020).

Residents told us that a main benefit of the area was that "everything is convenient" (Strathfield resident 2) with easy access to train services, buses, and local shops. This convenience and the affordability of housing in the area relative to other parts of Sydney were seen to make the precinct good "value for money…for working families" (Strathfield resident 1). However, the closest parks and children's playgrounds are about one kilometre away, there is no community centre, and there was nowhere local to "hang around" or to "meet and talk" (Strathfield resident 1). Heavy and constant traffic also made walking around the area unpleasant. Focus group residents highlighted a need for more pedestrian crossings, with walking journeys to Strathfield station lengthened by the unavailability of safe and convenient crossing locations.

Figure 3. Rhodes foreshore, looking south across Homebush Bay.

Figure 4. Vacant lot in Upper Strathfield, facing northwest along Cooper Street.

Figure 5. Underpass under the railway tracks in Upper Strathfield.

6. Factors Driving Different Outcomes Between the Two Cases

6.1. Planning and Public Infrastructure Provision

While both case studies involved the market-led delivery of apartment housing, different planning trajectories impacted how this development was managed, communicated to residents, and ultimately delivered.

Australian governments have taken a limited role in direct housing provision and management since the mid-20th century, privileging market-led housing delivery (Gleeson & Low, 2000; Troy et al., 2020). One flow-on effect is that public infrastructure funding has become entwined with private development processes, through reliance on developer contributions. Given the profit developers make through apartment development, mandatory contributions toward public infrastructure or affordable housing have become common in Australia and internationally (Crook et al., 2016; O'Flynn, 2011). While developer contributions often provide valuable public infrastructure, these contribution mechanisms are not always sufficient to meet the growing infrastructure needs associated with increasing densities (Allan et al., 2006). The debate also continues regarding whether the types of infrastructure provided through contributions adequately reflect community interests or preferences (O'Flynn, 2011). Further, this funding model usually requires development to occur before the infrastructure is provided, meaning the first residents must wait for infrastructure associated with subsequent developments to be completed before they have access to necessary spaces and services. Lower-income residents are likely to be particularly impacted by time-lags, where they cannot afford alternative services in the interim (or must travel or pay for private services). The different outcomes in Rhodes West and Upper Strathfield in this regard are especially notable.

6.1.1. Rhodes West

The first redevelopment plans for Rhodes West were produced in 1999. The area's proximity to the 2000 Sydney Olympics site and strong activism from nearby residents meant it attracted significant political interest at both local and state levels (Cook, 2007). While local government planners initially took the lead in developing the plans for the site (with involvement from state government planners and remediation experts), Canada Bay Council ultimately opted to hand responsibility to the state government, given the complex land remediation required. Political wrangling over the site culminated in an NSW parliamentary inquiry being held in 2002, after which the state government produced the initial planning framework for the area. This included a formal consultative role for a community liaison group and set development densities to enable developers to meet ongoing remediation costs while still making a profit. Additional non-statutory guidelines protected public access to the foreshore and controlled densities, particularly close to the water.

In 2007, Canada Bay Council was reinstated as consent authority for the neighbourhood (except for land still requiring remediation), prompting amendments to the planning controls. Approximately 20% of the area had been redeveloped, with the remaining sites having approved master plans. However, the Council was concerned that the planned public spaces and communal spaces within buildings were inadequate given the population densities. It sought expressions of interest from developers to help fund a larger community centre. A consortium of four developers prepared a joint masterplan allowing density and height increases in exchange for additional contributions towards community infrastructure. The consortium's proposal became part of the Council's statutory plans in 2011, resulting in an 8% increase to the permitted floor area across the development (City of Canada Bay, 2010). While the developments already completed were mostly low-rise, with some 10 to 12 storey buildings, the new scheme permitted up to 25 storeys close to the rail line. In return, additional developer contributions were provided, including $18m in cash, 23,195m2 in additional open space and a further $980,000 towards roads and toilets. The balance between density and open space was valued by residents living in Rhodes, with one resident commenting, "You have a certain density, and people are happy. If you keep adding…they build some tower here…[if] investors do everything, then you lose the garden, you have more people overcrowded. It's better to maintain this [balance]" (Rhodes resident 8). These balanced outcomes were only possible because of close relationships between local government and developers and the Council's negotiation skills:

> In the instance of Rhodes, it worked well because you had buy-in at a precinct scale, but that relationship was based on the ability of [the] Council to be well informed in the negotiation space and for those developers to be trying to drive a good outcome. (State government representative)

Infrastructure across the site was delivered in stages. A shopping centre was delivered early and became a focal point for community life, including as the venue for community consultation about subsequent development phases and the design of the expanded community centre (Canada Bay staff member). This level of public input was central to the positive outcomes:

> In Rhodes, Council did engage the community in the…master-planning process. People understand and lobby for the things that are yet to be delivered…that's brilliant. It shows how engaged they are and it's very place based. (Canada Bay staff member)

Planning the 43-ha site as a single entity made it easier to achieve visual and physical coherence, ensure an orderly development process, and justify the need for more community infrastructure. The active involvement of high-profile developers also made it more straightforward for the Council to successfully negotiate a plan to increase density in exchange for more community infrastructure (see also Easthope, Crommelin, et al., 2020). The successful outcomes relied on cooperation and communication between the developers and the Council, as well as the shared interests of local and state governments in seeing the high-profile site redeveloped well. The state government played a key role in laying the initial plans for a coordinated redevelopment of the peninsula. The Council also invested significant resourcing in the neighbourhood, establishing a Community Committee and hiring a place manager to facilitate engagement between community members and the Council.

6.1.2. Upper Strathfield

Upper Strathfield had a very different planning and development trajectory. The neighbourhood was earmarked as an area with development potential in the early 2000s due to its proximity to Strathfield train station. Since then, there have been multiple changes to planning controls. Early plans (2002) proposed building heights of up to 10 storeys, scaling down to six and then four storeys closer to low-rise residential streets in the eastern portion. Minimum requirements also applied to the provision of communal open space within developments, with public space investment supported by a contributions plan.

In 2008, the Council updated its planning controls. The low-rise eastern portion, dominated by occupied single-storey dwellings, was rezoned for medium-density residential uses allowing for apartment buildings with a maximum height of 8.5 m. Meanwhile, controversy surrounded the neighbourhood, with claims that a property developer had received preferential treatment from local planning authorities, including the opportunity to acquire public properties without a formal public tender (Besser, 2007). These claims highlighted a broader concern about the scale of landholdings by that developer, with their companies reportedly holding more than 30 sites in the area (Besser & McClymont, 2007).

Planning controls were again amended in 2013, with all developable land in the western part of Upper Strathfield zoned for high-density residential, allowing building heights between 17 m and 59 m. A Public Domain Plan and Contributions Plan came into effect in 2014 and set principles and controls to improve amenity while guiding medium and high-density residential development. The Council expected these public domain improvements to be realised over 15 years, through a combination of land acquisitions, disposals, and development contributions. However, at the time of writing, no new development had occurred under these latest planning controls.

Since 2014, other planning initiatives have promised to reshape the area's future. The neighbourhood is covered by the Parramatta Road Corridor Urban Transformation Strategy and the Burwood, Strathfield, and Homebush Planned Precinct, state government-led initiatives designed to provide clearer strategic direction for areas where significant population growth and physical change are expected. Both initiatives entailed more proactive involvement of state government planners in formulating planning policy and controls, but both had stalled at the time of writing. This is likely due to the 2019 announcement that a new station would be built at North Strathfield as part of the Sydney Metro West, changing the development landscape yet again.

The lack of coherent strategic planning for Upper Strathfield is problematic. A constantly changing development context and a lack of coordination among different agencies have left Upper Strathfield lacking a shared vision with political backing. Exacerbating these problems, the case study area has been peripheral within these broader strategies. For example, the Parramatta Road strategy covered Upper Strathfield but prioritised other sites. Similarly, the neighbourhood is on the periphery of the LGA and is separated by train lines and highways, so has arguably been peripheral to the Council's strategies too.

Alongside ongoing strategic changes, that much of Upper Strathfield is owned by a single developer has left the neighbourhood in limbo. While the reasons for the lack of development since 2014 are unclear, interviewees suggested that this landowner might be holding off developing sites in the hope that development densities would increase yet again. With no new development, there has been no scope to implement the 2014 Public Domain Plan. Residents involved in the focus group shared that plans for a park with a playground outside their apartment complex had not yet eventuated: "I think [the Council] are trying to wait for the other buildings to finish and then build a park in the end…that could take another 10–20 years" (Upper Strathfield resident 1). This highlights a key risk in relying on development contributions to fund public infrastructure: It requires development to occur, which in turn requires favourable market conditions, and owners to not be holding land as speculative investments.

6.1.3. Comparing the Cases

The failure to provide local infrastructure in Upper Strathfield has resulted in a poor living experience for residents. This is in notable contrast to Rhodes West:

> If you think of great developments, Rhodes, they built infrastructure first….Where this [does not occur], there is a need either for direct government intervention, simply providing the required infrastructure

> using a different funding stream, or a mechanism to incentivise the developer to proceed with development, including the proposed public infrastructure. (Canada Bay staff member)

The public profile of the neighbourhoods is another key difference. Rhodes West was a high-profile site with land owned by "tier one" developers (the largest and most experienced in the industry), and the site was developed shortly after the remediation of Homebush Bay for the Sydney Olympic Games. In contrast, Upper Strathfield is less picturesque, and the major landowner is less prominent. These factors played a part in shaping planning outcomes, as Rhodes West attracted greater political attention and, in turn, greater resourcing for coordinated planning approaches. As evidenced through the two cases, strong leadership at the local government level assists in achieving positive outcomes, as does a coherent planning vision at the state government level, and coordination between state and local governments. While Rhodes West was an area of significant focus for both the Council and the state government, Upper Strathfield has received less attention, and the difference in outcomes for residents is marked.

6.2. Place Management and Community Engagement

While the case study areas are not purposefully planned mixed-tenure developments, important insights can still be gleaned from literature on what makes planned mixed-tenure developments work well. For example, Rowlands et al. (2006) highlight the importance of placemaking, ongoing management and quality design in achieving positive outcomes. Best practice design to facilitate community engagement includes well-maintained, welcoming, shared open spaces, playgrounds, and community facilities; design that encourages active mobility, street-level interaction, and the opportunity to engage in social programs; and a community services "hub" in a central location with a mix of services such as shops, health services, or a library (Stubbs et al., 2017). Alongside design, community engagement is also important. This includes involving residents in the planning and design process, establishing a clear pathway for the community to share concerns regardless of their tenure status, and welcoming/social inclusion activities in new developments (Stubbs et al., 2017).

6.2.1. Rhodes West

Rhodes West benefits from the presence of a highly engaged community, and governance arrangements and facilities that support this engagement. As one resident explained, multicultural community associations helped in "building a real community atmosphere" (Rhodes resident 4). In addition to community groups that run events and regular programs to connect community members, the Rhodes Community Committee (RCC) provides the opportunity for residents to discuss strategic issues directly with Council representatives. Formed in 2014, the Committee replaced a similar group established by the Council in 2005 in neighbouring Rhodes East. Resident interviewees told us of the longstanding and positive relationship between the Council and the RCC. Although an interviewee felt that the committee was primarily a means for information exchange, not having "a lot of teeth to it" (resident RCC representative), they also pointed out occasions when the Council had proactively engaged with them on planning and development issues.

Another unusual but advantageous feature of the governance arrangements for Rhodes West is a dedicated place manager position within the Council. Interviewees said the presence of this dedicated place manager provided a repository of long-term, embedded local knowledge. Having this role established before significant redevelopment occurred also helped address many challenges faced during the transition from the development phase to the operational phase of the neighbourhood. One resident explained it made them "feel like I had a voice and there was somebody…looking out for us and paying attention to us" (RCC representative).

6.2.2. Upper Strathfield

While Upper Strathfield is perhaps not large enough to justify its own community centre, residents reported that the lack of local community spaces made it difficult to connect with others and form local relationships. Resident interviewees told us that there are no community groups or networks in Upper Strathfield and that they knew very few locals, even within their buildings:

> We know some people in [our] building, but…just when we happen to bump into those people. There's no formal or proper place to meet or to talk to those people really…we'd all like a community centre…it would be good if they could have something like that. But as long as they are waiting for the builders to do the planning, I think that's why [we don't have one]. (Upper Strathfield resident 1)

While the Council aspires to achieve "density done well" in its Local Strategic Planning Statement (City of Canada Bay, 2020, p. 9), Upper Strathfield falls short of this goal. Although Upper Strathfield has good access to public transport, this is not enough and residents also need spaces and facilities within easy walking distance.

The Upper Strathfield case also highlights the importance of communicating well with residents. Residents had been told about the plans for a local park and were frustrated because that it was yet to be built. While explaining the reasons for this is not straightforward (especially with new infrastructure delivered elsewhere in the LGA), having an entity like the RCC in place would

have made this communication easier. It may also have allowed residents to suggest temporary changes that could mitigate the impact of the delayed infrastructure.

6.2.3. Comparing the Cases

The case study findings raise important questions about why community engagement processes like those adopted in Rhodes West—the RCC and a dedicated place manager—were not employed in Upper Strathfield. Given that the area has undergone multiple rounds of changes to local planning controls and is recognised in state-led planning processes as being of strategic importance, this discrepancy seems hard to justify. These differences appear to have meaningfully contributed to the contrasting resident experiences in the two case study areas.

7. Reflections on How to Improve Outcomes for Low-Income Apartment Residents

Australia, alongside other countries internationally, houses a sizable population of lower-income residents in private apartment buildings. To date, however, little consideration has been given specifically to the needs and experiences of these residents, particularly at the neighbourhood scale. Through a detailed consideration of two contrasting case studies within the same LGA, this article has shed light on the experiences of these residents and highlighted the importance of coordinated and collaborative government intervention in property development processes to ensure good outcomes for these communities. It has also illustrated the potential for the planning and design of high-density neighbourhoods to vary markedly, even within a single jurisdiction. In this section, we reflect on the differences between the two case studies, to identify lessons to inform private apartment development in future.

The most striking difference between the two cases is that while Rhodes West was treated as a flagship development by politicians, planners, and developers, Upper Strathfield was not. While implicated in multiple strategic plans, it was not central to any. Meanwhile, Rhodes West was singled out for intensive support and resourcing by the Council and was also viewed as being of strategic importance by the state government.

There are various explanations for this discrepancy. One is that Rhodes West was a master-planned "brownfield" site which benefitted from state government involvement and investment from the beginning due to the complex remediation requirements. By contrast, Upper Strathfield is effectively an infill development area, involving multiple separate land parcels across a smaller area, although a single developer owns most of the properties. This may have resulted in different expectations from local government about how the development would proceed, and the extent to which the community could have meaningful input. Another explanation is that Upper Strathfield is physically marginalised, being effectively cut off from the rest of the LGA by a major road. Indeed, one resident interviewee said that they thought that the neighbourhood's location meant that they "get forgotten sometimes" (Strathfield resident 1). A Canada Bay Councillor concurred, describing Upper Strathfield as "out of sight, out of mind" and a "no man's land" (Bastians, 2019). Rhodes West, by contrast, was a high-profile foreshore development in the heart of the LGA. The value (both economic and political) of this site drew governments' attention, while also attracting developers with the experience, resources, and incentive to work proactively to achieve a high-quality outcome. The different approaches to planning and development in the two case studies, and the different outcomes for residents, should be of great interest to other jurisdictions both in Australia and internationally concerned to ensure the successful delivery of the compact city model for a diverse population.

These different political and market contexts play an important part in explaining why the two case study areas had different outcomes. But while they may explain the different outcomes, it is harder to justify them. If Rhodes West is a demonstration of what is possible, the question becomes: How can we ensure the types of outcomes achieved in Rhodes West are achieved elsewhere? A key lesson from the Rhodes West case is that coordinated and collaborative planning processes are essential to ensuring that the needs of lower-income households are met in privately developed apartment neighbourhoods. Doing this well requires close coordination between local planning activity and state-level strategic planning processes. In addition, to achieve well-planned, staged infrastructure provision that meets the community's needs over time, local governments need to be properly resourced to undertake a strong coordinating role in all areas undergoing redevelopment. This will require more funding for local governments to meet growing infrastructure needs and to support place management and community engagement activities across all neighbourhoods, not just flagship sites. It also requires councils to be able to pool and reallocate funding in a strategic way, rather than relying on developer contributions tied to particular projects.

There is also a broader lesson from these cases. So long as the privatised housing model that underpins Australia's system of funding and delivering housing prevails, lower-income residents will be at risk of disadvantage, given their reduced capacity to compete for the best properties and locations. So long as systems rely primarily on the private delivery of housing, it must be the government's role to redress the imbalance in outcomes by prioritising the needs of lower-income residents in neighbourhood-scale planning and infrastructure provision, to even the playing field as best as possible. The Rhodes West case demonstrates that "density done well" is possible given thoughtful planning and sufficient resources. What is yet to be achieved is

a system that can produce such outcomes in peripheral neighbourhoods like Upper Strathfield as well as in flagship locations like Rhodes West. Achieving this will require a clearer acknowledgement of the experiences of lower-income residents in the private housing market, and the political will to ensure their needs are met. Given that Australia is fast becoming a nation of apartment dwellers, a failure to tackle this issue puts the prosperity and social cohesion of our cities at risk.

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The authors declare no conflict of interests.

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Article

Rise Overrun: Condoization, Gentrification, and the Changing Political Economy of Renting in Toronto

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Abstract
Privately owned high-rise condominiums have been increasing as a proportion of all housing units built in the Greater Toronto Area for many decades. This has inspired a growing literature theorizing both "condoism" as an emergent planning-development regime and the implications of "condoization" and "condofication" for urban governance and everyday life in cities like Toronto. Building on this literature, this article assesses the implications of Toronto's increasing reliance on (mainly vertical) condominium development for the socio-spatial transformation of the housing market, particularly for renters. Analyzing time-series data from Canada Mortgage and Housing Corporation and the Census of Canada to quantify the effects of the city's condoization, we answer three key questions: How important is condominium development for understanding the restructuring of Toronto's economy? How has condoization contributed to the ongoing gentrification of Toronto's inner city? How is condoization restructuring Toronto's rental market? Building on previous research categorizing and mapping the gentrification of Toronto's inner city, we find that condoization is an increasingly defining element restructuring the city's rental market, while this restructuring also plays a central role in the advancing gentrification of the city's core.

Keywords
Canada; condominiums; financialization; new-build gentrification; rental housing; Toronto; urban political economy

Issue
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1. Introduction

Since the turn of the century, a significant amount of new housing in the Toronto region, and a majority of new units within the central city, has been built in the form of high-rise condominiums, continuing a trend that has been building for decades (Rosen & Walks, 2013, 2015). And with very few new social housing units constructed (in part due to the adoption of neoliberal policies that have halted funding at upper levels of government and downloaded responsibility for producing social affordable units to municipalities, see Hackworth & Moriah, 2006; Walks, 2006), the city now effectively relies on condominium investors to supply the city's necessary new rental stock. In this way, "condoism"—which refers not only to the ideology and political economy of condominium development and its importance for economic growth and the creation of new political regimes, but also to the political, cultural, and social transformations that it begets (Rosen & Walks, 2013)—has become a central force in the restructuring of contemporary Canadian rental housing systems.

There is a particular geography to this process. The condo tenure and form of development are also a response to Toronto's local zoning requirements, which spatially restrict much of this new development within particular areas of the downtown and areas near transit infrastructure. With the coupling of provincial land-use policies that restrict suburban expansion at the fringes (discussed below), the disappearance of the few

remaining low-intensity lots that can be built on (parking lots, old industrial sites), and the continued population growth in the city, new development over the last two decades has predominantly taken a "vertical" form. And with a lack of purpose-built rental units to meet the need for rental housing, these high rises have necessarily appealed to investors capitalizing on rising demand for private rental housing (Lippert, 2012), with almost half of condominiums in downtown Toronto now occupied by renters today. Although this process is not new—some high-rise condos have been rented out from their inception—the increasing reliance on the condo form to provide the bulk of new rental housing represents a major transformation of the tenure dynamics in the city and an important challenge to the regulation of rents and the governance of renters (Lippert, 2019).

Gentrification is traditionally associated with the conversion of rental to owner occupation, and so an increase in rental housing would not normally be associated with gentrification. Yet, the condoization of the city is bringing new demographic characteristics distinct from the typical renter, such that they have the potential to act as gentrifying agents in particular parts of the city. This challenges assumptions about the role of renters in our understanding of inner-city gentrification in an era and regime characterized by processes of "condoization" (Kern, 2010; Lippert, 2012, 2019) or "condofication" (Lehrer & Wieditz, 2009). Indeed, as house-price inflation has driven homeownership increasingly out of reach of the middle class (Walks, 2014, 2021), a larger segment of society must now compete to find stable housing in the rental sector. In seeking tenancy in private rental housing, one competes with a number of potential users, including prospective homeowners, speculators (many of whom are happy to leave their properties vacant), tourists looking for short-term rentals (with many landlords preferring to let the units on short-term rental sites like Airbnb), and other higher income renters who bid the highest price for access to that space (Grisdale, 2021; Hawes & Grisdale, 2021; Wachsmuth & Weisler, 2018). And the condominium tenure form provides the flexibility of use for investor landlords, not possible in the multi-family rental housing of a previous era, which gives the "condo" a fluidity that allows it to shape-shift its role as the city evolves.

In light of these dynamics, this article assesses the evolving role of condo-ism and condoization in restructuring the political economy of Canada's largest metropolitan housing market, paying particular attention to its role in restructuring the rental housing system. Building on previous work documenting the history and the governance implications of condoization in Toronto (Lippert, 2012, 2019), the condofication of the city with its implications of new forms of gentrification (Lehrer & Pantalone, 2018; Lehrer & Wieditz, 2009) and the building of condo-ism as a regime with its own political-economic logic (Rosen & Walks, 2013, 2015), we conduct quantitative analysis of the most recent data to assess how the growth of the condo form, coupled with shifts in housing policies, has continued to shape the transformation of the city at both the micro and macro levels. In this article, we seek to provide answers to three key initial questions that will form the basis for future explorations of the condoization of the city:

1. How important is condominium development for understanding the restructuring of Toronto's economy in recent decades?
2. How has the importance of condo development to the ongoing gentrification of Toronto's inner city grown over time?
3. How might condoization be restructuring Toronto's rental market?

2. The Political Economy of Condoism and Condoization

Colloquially known as condos, condominiums were first legislated into existence across North America in the 1960s. While generally associated with high-rise built forms, they actually describe a form of tenure that creates different rights for interior unit space separate from the building/land footprint, and collective spaces attached to this footprint. Harris (2011, p. 694) defines the condominium as:

> A form of land ownership that combines private ownership of an individual unit in a multi-unit building with an undivided share of the common property in the building and a right to participate in the collective governance of the private and common property.

Since their expansion in the 1980s, this legal innovation has had a distinct impact on the built environment of cities like New York, Toronto, and Vancouver, as it enables the "vertical subdivision of land" (Harris, 2011, p. 694). By enabling a higher density of private interests in the housing market, this form has facilitated the drive toward realizing the "highest and best use" (Harris, 2011, p. 694) that zoning will allow on a parcel of land—resulting in a "rising" (vertical) city (Rosen & Walks, 2013).

Lippert (2019, p. 3) notes that the term "condoization" first appeared in the 1970s when it primarily referred to the practice of converting and dividing rental apartment buildings into condominium tenure for private sale and purchase. Of course, this initial practice of tenure conversion has since given way to an entire regime of new build development and governance itself, especially in North American cities like New York, Toronto, and Vancouver (Lippert, 2019). Here we mobilize the concept of condoization, following Lippert's (2019, p. 4) definition as "a summary term referring to all the agents, knowledges, logics, and processes that have arisen, been repurposed, or continue to emerge and are assembled in spaces and times to make the condo and its governance possible." Relatedly, Rosen and

Walks (2015, p. 290) have theorized "condo-ism" as a mode of urban development "dependent upon continued intensification and real estate development in the city, with mortgage credit displacing industrial expansion as the primary driver of the urban growth machine," and that promotes neoliberal policy solutions and the privatization of space in the era of "third wave" urbanization identified by Scott (2011). The condominium boom underlies a core economic development strategy in Toronto itself, one sustained by what Devine (2007, as cited in Lehrer & Pantalone, 2018, p. 91) calls "let's make a deal planning"—a boosterist political urban economy premised on developers negotiating with city councillors for higher density allowances in exchange for public amenity contributions (see also Biggar, 2021; Hyde, 2021). As a consequence of this combination of density bonusing policies and government policies designed to intensify development while preserving the "greenbelt'' around the Greater Toronto Area (GTA; particularly Ontario's Provincial Growth Plan from 2006, and the Places to Grow Act 2006), vertical development has come to dominate and even define urbanization in the GTA (Rosen, 2017).

These shifts are occurring within the context of continued urban deindustrialization in the Global North, including Canada (see High, 2003). Filling the void left by deindustrialization has been the process of financialization, in which profits increasingly accrue through financial channels instead of through commodity production, even among many commodity-producing firms, leading to a profusion of—and demand for—new financial securities (Aalbers, 2016; Krippner, 2005). Housing has been among the most extensively and rapidly financialized sectors in the economy, with homes representing a major asset through which new forms of financial securities have been devised to attract increasing flows of financial investment (Aalbers, 2016; Walks, 2021). The rise of mortgage-backed securities and other financial innovations allow for land and housing to be increasingly treated as a "pure financial asset" (Haila, 2006). Under financialization, there has been a huge shift of investment—Aalbers (2016) calls it a "wall of money"—flooding into housing markets searching for above-average returns. The condominium, as an innovation allowing for the privatization of floating vertical space (Harris, 2011), is thus an almost-perfect vehicle for creating spaces for new housing out of thin air (literally) to absorb this demand for investment outlets.

With economic growth increasingly reliant on the financial sector and on other "cognitive-cultural" industries involved with the production and sale of proprietary (often digital) products, demand for both residential and employment space has shifted back to the downtowns of central cities in recent decades, especially in those "global" cities already concentrating financial and business services (Scott, 2011). This is a key dynamic supporting the (pre-pandemic) third-wave urbanization trend of population re-concentration at the core, which, until the recent and rapid rise of remote work, could not be accommodated in more traditional suburban/exurban forms of housing. With the condominium, the sky would appear to be the limit when it comes to re-urbanization (but see also Lehrer & Pantalone, 2018). This applies to developer profits as well (Rosen, 2017), and, for some time, developers have been purchasing inner-city and transit-accessible land for higher-density developments dependent on condominium tenure. As many former employment lands are redeveloped for residential development in the condo form, municipalities in the Toronto Census Metropolitan Area (CMA), especially the City of Toronto, have become increasingly dependent on condoization for jobs and government revenues (Rosen & Walks, 2015).

Furthermore, government policy has effectively promoted condominium development as the key source of new rental housing, as firms and households purchase units in condo buildings as speculative investments (Walks & Clifford, 2015). From the mid-1990s through the late 2010s, there has been very little interest from private developers in building purpose-built rental housing, in part because condo development has been so lucrative. Although the City of Toronto has been one of the few cities in Canada that has seen some new social rental housing built (non-market housing in which rents are geared to income), only approximately 15,000 new such units were built between 1991 and 2011, despite there being over 81,000 people on the social housing waiting list, with many households waiting for over a decade (Walks et al., 2021; Walks & Soederberg, 2021). And in Toronto, all new-build residential housing constructed after November 1991 was made exempt from rent control by the Ontario Rent Control Act 1992, with the intention of promoting investment in rental housing. This occurred again after only a short time during which rent control applied to new condos (April 2017 to November 2018), when the Ontario government revised the Residential Tenancies Act in 2018 and removed rent control once again from new-build units from November 2018 onwards. This legislation also applies to new purpose-built, multi-family rental housing, but the truth is that the vast majority of new rental units derive from condos. The condo has filled the need for rental housing, with the Canada Mortgage and Housing Corporation (CMHC) estimating that almost 57% of condos built in 2020 were subsequently let on the rental market. Such trends pre-date the Covid-19 pandemic, with the CMHC (2021) noting that between 2016 and 2020, approximately 50% of new condo units were immediately rented each year, on average. As the condo sector became the main source of new rental housing, it has been increasingly driven by investor activity (CMHC, 2021; Lippert, 2012).

However, in the absence of dedicated construction of purpose-built private or social rental housing, the concentration of new private condo units in Toronto's inner city (typically identified as following the boundaries

of the three former pre-war municipalities of the old City of Toronto, old City of York, and old Borough of East York, all of which were amalgamated with three other municipalities into a new, larger City of Toronto in 1998; see Boudreau et al., 2009), portends an increasingly expensive and exclusive city. Condominium rentals in Toronto typically command rents approximately 50% higher than equivalent units in the multi-family, purpose-built sector (CMHC, 2021). Demographic shifts in the city characterized by increasing polarization in the labour force between high-paying work in finance, insurance, and real estate (FIRE) and creative/cognitive industries, and more precarious workers in "unskilled" labour and services, are increasingly articulated within the condominium sphere. As a higher-income workforce increasingly chooses to locate downtown in the city's new-build developments, wage workers have, in turn, been displaced to automobile-dependent suburbs where rents and housing are cheaper—this is where the condo sector provides more affordable housing (Harris & Rose, 2019).

Although, on average, the incomes of condo *homeowners* within Toronto's inner city largely reflect the overall average incomes of other *non-condo households* in the city as a whole (Walks et al., 2021), those inner-city household averages are also increasing over time, in part because of the loss of more-affordable rental housing that is disappearing as many sections of the city are redeveloped for condominium development. Thus, where upwards of half of all new condominium units are rented, this effectively represents the replacement of affordable rental units with less-affordable (often "luxury'') units. And at the same time, existing affordable housing in purpose-built rental units near condominiums in the downtown core are also being lost as corporate investors buy up these towers with the intention of renovating and attracting the same higher-income tenants one might find in the condominium rental market (August, 2020; August & Walks, 2018).

All of this raises questions concerning the role of condoization in Toronto's gentrification, including the reliance on condo development to produce new rental units (Lehrer & Wieditz, 2009; Lippert, 2012, 2019). Of course, because it is originally understood to involve conversions to ownership and the direct displacement of existing, working-class residents (Glass, 1964), some contend that "new-build" gentrification is a misnomer because it does not describe a process of direct displacement (Boddy, 2007; Buzar et al., 2007). However, this claim side-steps the potential for displacement to also occur through the rental housing system (Paccoud, 2017). Marcuse (1985) notes that "exclusionary" displacement can occur when the average prices or rents in a local area increase to a level where they are no longer affordable to those who would previously have lived there. Thus, exclusionary displacement can be seen even in neighborhoods that maintain or are expanding their rental stock if vacating households would not be able to afford the same unit as incoming households. Marcuse also describes the concurrent process of displacement pressure whereby the changing cultural and economic character of a neighborhood puts pressure on existing residents to leave. In instances where existing tenants are not immediately displaced, they might otherwise be increasingly outnumbered by richer gentrifiers with new and more expensive tastes that local businesses increasingly cater to (Lehrer & Wieditz, 2009). If more than half of new residents are renters, this troubles traditional narratives around gentrification, which often assume that renters are necessarily more marginalized or lower income than owner-occupiers (Kern, 2010; Lippert, 2019, p. 13). This article sheds light on the contribution made by condo development, including rental condo units, in Toronto's gentrification, although a full-scale analysis of displacement and gentrification within the rental stock is outside the scope of this article (because, among other things, the data needed to identify displacement is not available and would require a completely separate methodology).

3. Data and Methodology

In this article, we analyze a series of datasets to shed light on the importance and role of condominium development within the Toronto CMA. In doing so, we are also updating and extending the work of Lehrer and Wieditz (2009) and Rosen and Walks (2013, 2015). The most reliable data on housing completions comes from the CMHC and the Census of Canada. Data on housing sales comes from the firms (a) Altus Group, which collects data about the housing market in Canada and publishes regular reports on condominium development, and (b) the Toronto Regional Real Estate Board (TRREB), the professional association of registered real estate agents in Ontario. TRREB owns and operates Toronto's multiple listing service, the main source of data on activity in the resale residential property market. In the CMHC's datasets, condominiums are a unique form of housing tenure that is tracked as its own category, with other categories (namely "homeowner" and "rental") broadly describing the intended tenure of units at the time of absorption. The CMHC keeps track of these trends in its annual market reports, where one can see how the scale and proportion of condo housing have shifted between ownership and rental tenure over time and in different geographies.

To answer our questions regarding the importance of condoization for Toronto's economy, we examine how the change in condo sales and employment in the condo sector relate to overall changes in the employment base and GDP of the Toronto CMA and the City of Toronto within this. To assess the scope of the condominium resale market, figures were rigorously aggregated and calculated for the CMA, the City of Toronto (also known by its area code 416), and the suburban (area code 905) scales from 20 years of resale data found in monthly real estate reports produced by TRREB between 2001 and 2020. To estimate activity occurring in the new-build

condo market, this article draws on monthly condo absorption data provided by the CMHC and calculates the sales dollar volumes of new build condos in conjunction with Altus Group reports on average monthly benchmark prices of new condos in the GTA between 2004 to 2020. Note that this data tracks condo activity only up to the beginning of the Covid-19 pandemic. Indeed, the effects of the pandemic on the condo market will require a fully separate analysis once the 2021 and 2026 census data are released.

In order to assess how condo rental units have expanded at the neighbourhood scale and how condominiums interact with gentrification, our analysis draws on data for census tracts, which are spatial units containing roughly 4,000–8,000 people bounded by major roads, railway lines, and natural features like parks and rivers/lakes. We categorize tracts by their degree of housing condoization. A tract is considered "fully condoized" if condos make up at least 75% of dwellings, "moderately condoized" if 50–75% of dwellings are condos, and "less condoized" if fewer than half of dwellings are condos. We also assign a predominant tenure to condoized tracts based on whether the majority of condo dwellers are renters or owners. An "owner condoized" tract is one which is condoized, but the majority of condos are inhabited by owner-occupiers, while a tract is "renter condoized" if condo inhabitants are primarily renters.

In order to interrogate the geography of rental condoization, location quotients (LQs) are calculated for all census tracts in the Toronto CMA that contained at least one condominium unit in 2020 (n = 541 tracts). Four different LQ variables were calculated in total from (a) the percentage of condos that are in rental tenure per tract in 2020, (b) the absolute number of condos rented per tract, (c) the change in the proportion of condos in rental tenure between 2013 and 2020, and (d) the absolute increase in the number of condos rented per tract between 2013 and 2020. We consider a tract to have a "highly condoized rental stock" if it has an LQ of 1 or more (one being equivalent to the regional average) in each LQ category defined above. Tracts with a "very highly condoized rental stock" are those with an LQ of 2 or greater in each of these categories.

To assess the contribution of condo development to gentrification, we employ the definitions and operationalization of gentrification developed by Walks and Maaranen (2008) in their earlier study of Montreal, Toronto, and Vancouver from 1961 to 2001, updating these observations for Toronto in 2016. In brief, gentrification is operationalized as tracts that in the 1950s and 1960s housed a predominantly working-class population with below-average incomes and above-average proportions of tenants, but which subsequently saw the proportion of rental housing decline, rents and land values increase, and the social status of residents—with average incomes being a key indicator of this—disproportionately rise. Gentrification in different tracts is subsequently categorized based on the predominant development process defining the neighbourhood changes in that tract. Tracts labelled as "new-build gentrification" are those in which the main development process involves the construction of new (typically condominium) units. We also identify condo conversions, in which older buildings (built before 1961, before condominium legislation was passed in the Province of Ontario)—either in rental tenure or in non-residential use—are converted to residential condominiums by 2016. The category of "standard practice" is applied to gentrifying tracts where the older residential stock underwent upgrading in social status as well as conversion of older rental stock to owner-occupation. When more than one of these processes is identified, the tract is labelled as having a combination, as noted. The designation "other trends (not gentrification)" includes elite upgrading and elite recapture, neighbourhood decline, and mixed trends (for more information, see Walks & Maaranen, 2008).

We draw on this analysis to show the proportion of tracts (neighbourhoods) that have gentrified as a result of condoization, compared to other forms and practices of gentrification. We furthermore examine how much the incomes of condo residents (a key indicator of social status change) factor into the total change in average incomes within each tract and use this to estimate the extent to which condoization has contributed, in general, to the overall experience of inner-city neighbourhood-based gentrification in Toronto since 2001.

4. Findings: Building Condoism in Toronto

Continuing past trends documented by Lehrer and Wieditz (2009) and Rosen and Walks (2015), it is clear that housing development in the City of Toronto has increasingly involved condoization for the last two decades. New condo units represent more than 77% of all housing completions in the City of Toronto between 1998 and 2021 (see Figure 1). Across the entire GTA, the production of "homeowner" housing (CMHC's statistical designation for new, non-condo units intended for owner-occupation) peaked in 2001, when 82% of all new housing completions (41% in the City of Toronto, 90% in the suburbs) were built in that form (see Figure 2). Since then, condos have become the dominant form of new-build housing across the Toronto CMA, making up 62% of all completions in the Toronto CMA in 2020 (77% in the City of Toronto, 43% in the suburbs). Condominium development has also been on the increase in Toronto's suburbs, with the condo share of new housing quadrupling over the last 20 years (see Figure 3). In total, in the period between 1990 and 2021, 390,957 condominiums were built in the CMA region. This emphasis on the condo as the predominant housing form and tenure has created a vertical city: Not only have the vast majority of new condos been built within the inner city (the three former municipalities built in the pre-war era are the old City of Toronto, City of York, and Borough of East York), but a full 71% of units built between 2011 and 2021

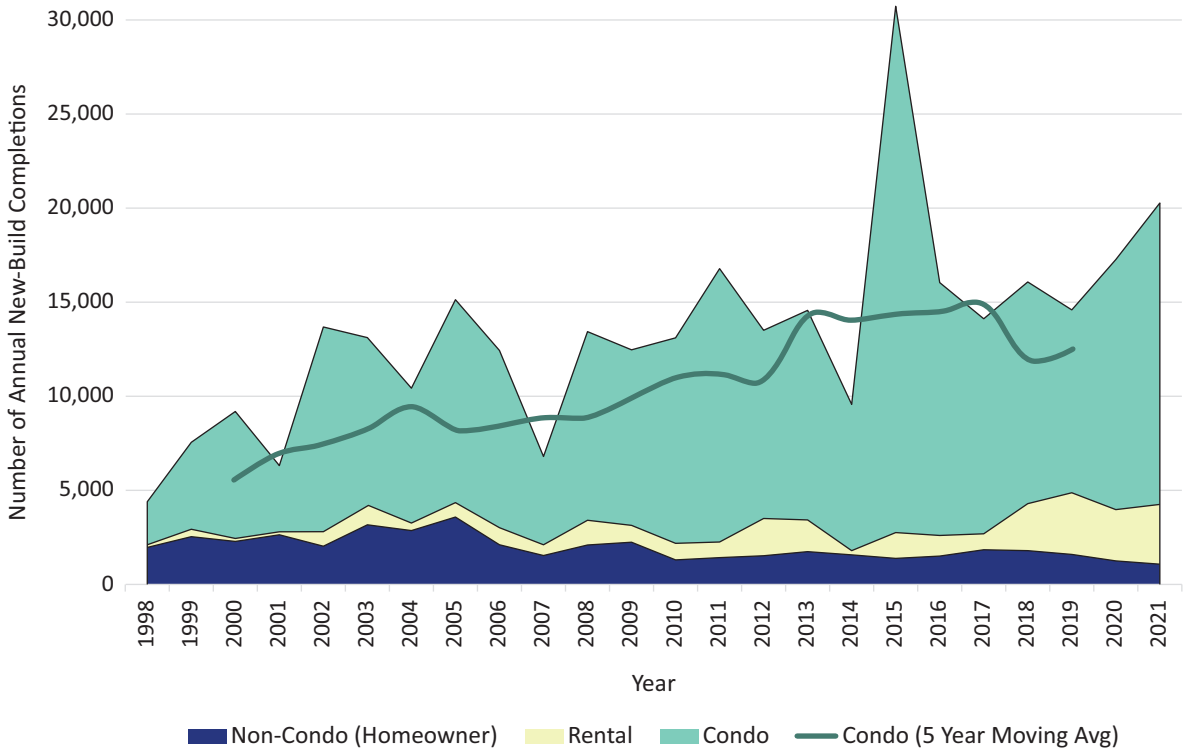

Figure 1. New build housing completions by intended market in the City of Toronto, 1998–2021. Source: Calculated by the authors using data from CMHC (2022).

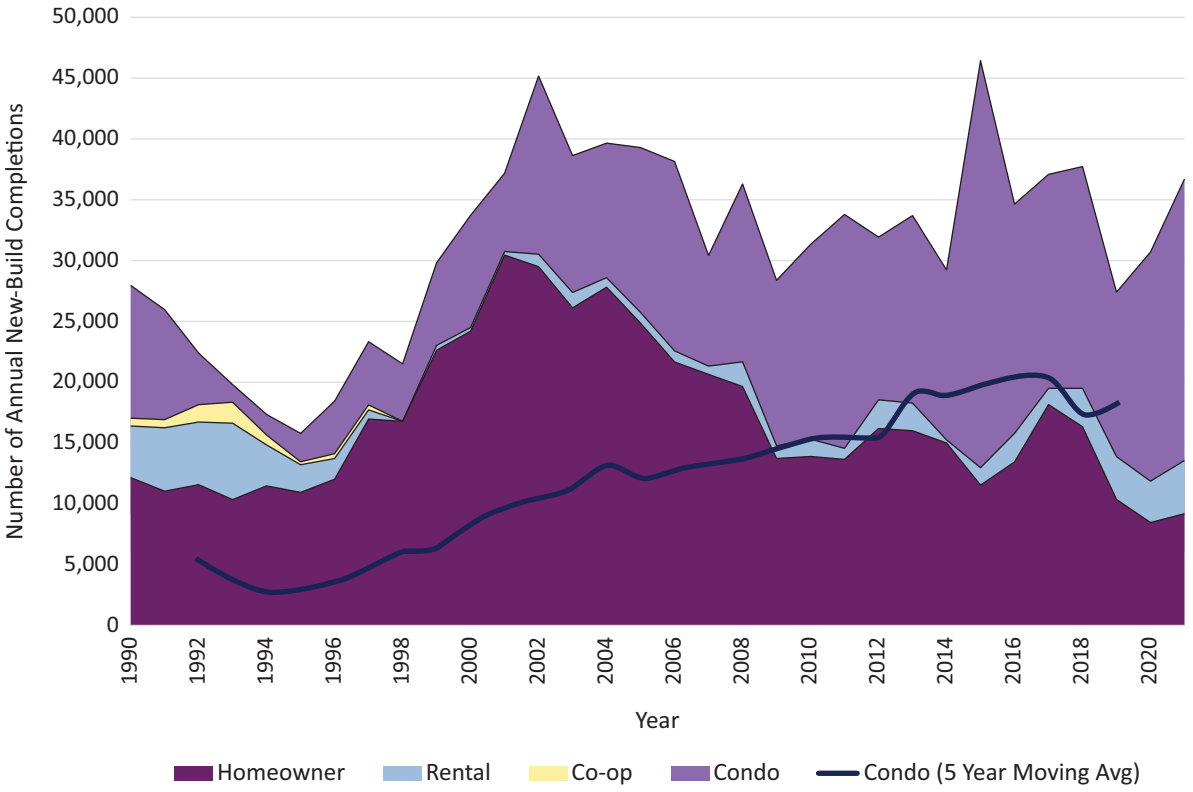

Figure 2. New build housing completions by intended market in the Toronto CMA, 1990–2021. Source: Calculated by the authors using data from CMHC (2022).

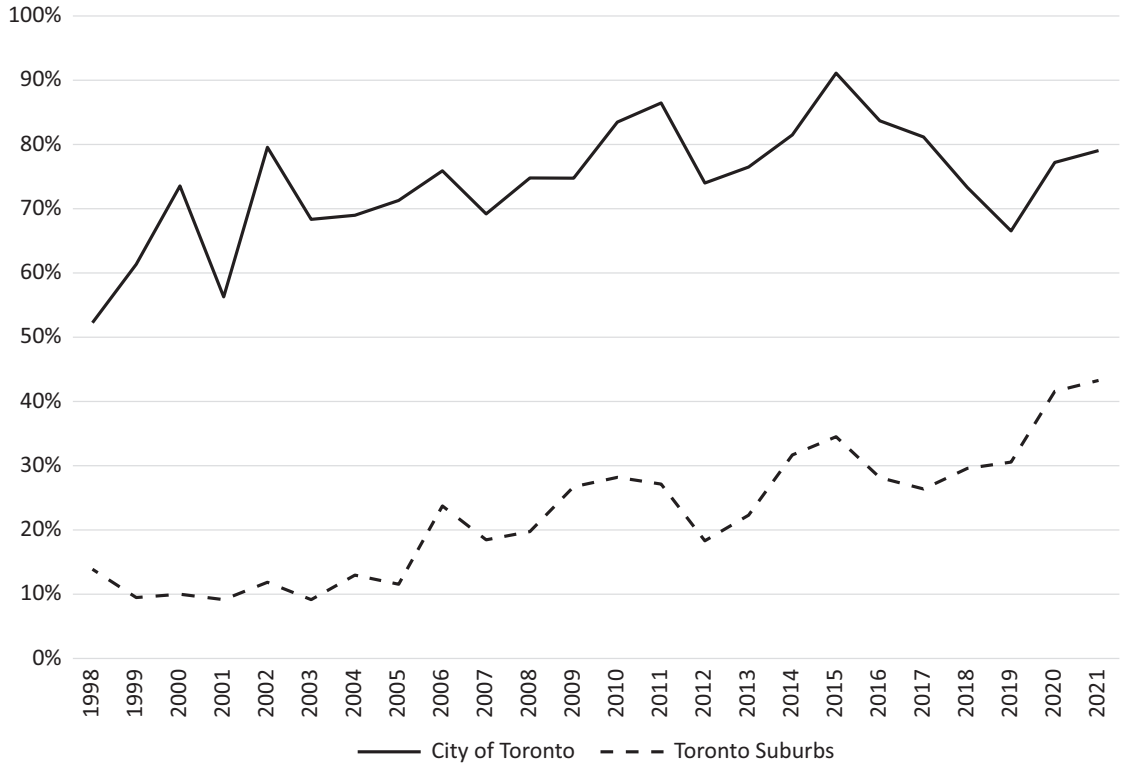

Figure 3. Annual proportion of new build housing completions that are condominiums in the Toronto CMA, 1998–2021. Source: Calculated by the authors using data from CMHC (2022).

were in projects of more than 300 units while 91% of condo renter households in 2016 were living in buildings of five stories or higher. As such, the condo has created a "rising" city, but with uneven geography to this density, as many other parts of Toronto have simultaneously been losing population due to population ageing, declining household sizes, and more recently, the Covid-19 pandemic (Gibson, 2022).

4.1. Condos Driving the Economy

One window into the importance of condominium development to the overall economy of the Toronto CMA is provided by condo unit sales. The results suggest that an increasing proportion of total economic growth in the region has been dependent on the condominium market. We differentiate new condo sales (absorptions) from resales and also distinguish sales located within the (new) City of Toronto (the 416 area code) and the surrounding suburban municipalities (the 905 area code). While total condo sales were equivalent to approximately 3.2% of the Toronto CMA GDP in the first three years of the 2000s, this grew to an average of 5.1% in the first three years of the 2010s before reaching an average of 7.5% in the last three years of the recent decade (Figure 4). That is, the Toronto regional economy became more than twice as dependent on condo sales by the end of the period as at the beginning (we average the first and last three years because of the uniqueness of 2020 as the beginning of the pandemic).

Furthermore, economic dependence on the sale of condos is spatially over-concentrated within the City of Toronto: condo sales (both new and resale) increased from an average of 2.1% of the metropolitan (CMA) GDP in the early 2000s (2001–2003) to an average of 5.1% by 2018–2020. Because the City of Toronto represents roughly 52% of the CMA labour force (and, by extension, its economy), this implies that condo sales (both resale and new) rose from roughly 4% to almost 10% of the City of Toronto's economy (4.1 to 9.8%). They rose even faster in the suburbs but to a lower level (from about 2.2 to 4.9% of the suburban GDP).

Furthermore, growth in the condominium sector would appear to account for virtually all of the overall growth in broader FIRE sector employment and much of the growth in construction sector employment (Figure 5). Together, these sectors accounted for an average of 26.5% of the Toronto CMA's GDP in the early 2000s, growing to 28.1 by the early 2010s and to 29.3% of GDP by 2017–2020. The tightness of the relationship between new condo development and jobs in the FIRE and construction sectors can be seen in Figure 5. There is a clear trend in which employment in these combined sectors follows, with a slight lag, the trends in new condo units built. Condos were key investments driving Toronto's late 1980s housing bubble, and when that earlier bubble burst, employment in both the FIRE and construction sectors declined. However, the housing bubble that was ignited in 2001 through federal policies encouraging lending (Walks, 2014) led to a rapid increase in new

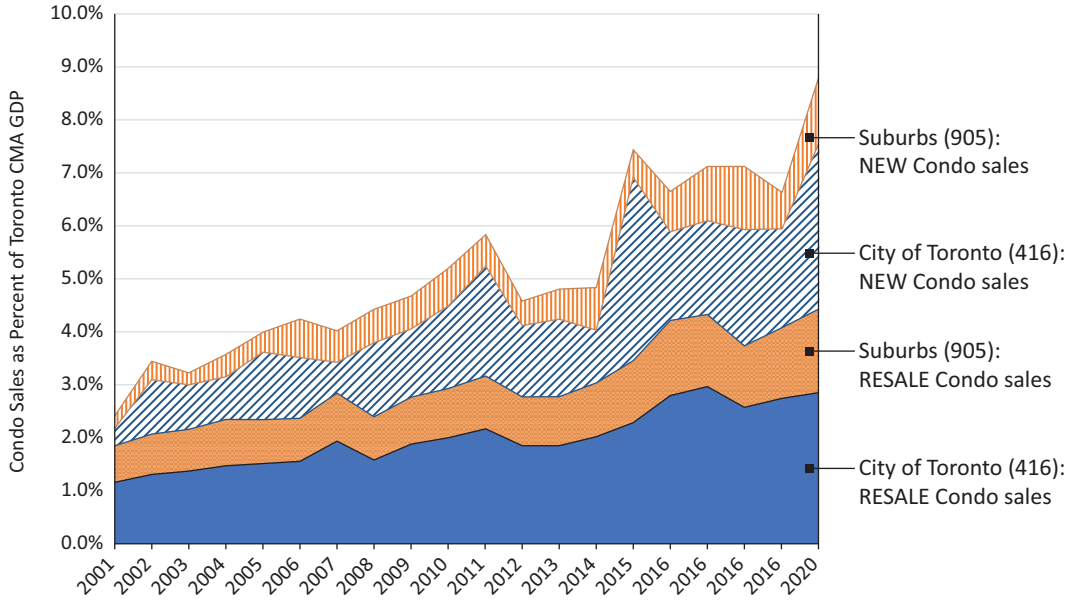

Figure 4. Contribution of condo sales to the GDP of the Toronto CMA, 2001–2020. Note: As the GDP of the Toronto CMA for 2017 and 2018 was estimated to be 49.98% of the Ontario provincial GDP by Statistics Canada, we assume a similar ratio carries forward for 2019 and 2020. Source: Calculated by the authors using data obtained from Altus Group (2020), CMHC (2022), Statistics Canada (1981, 1991, 2001, 2006, 2011, 2016, 2022a), and TRREB (2021).

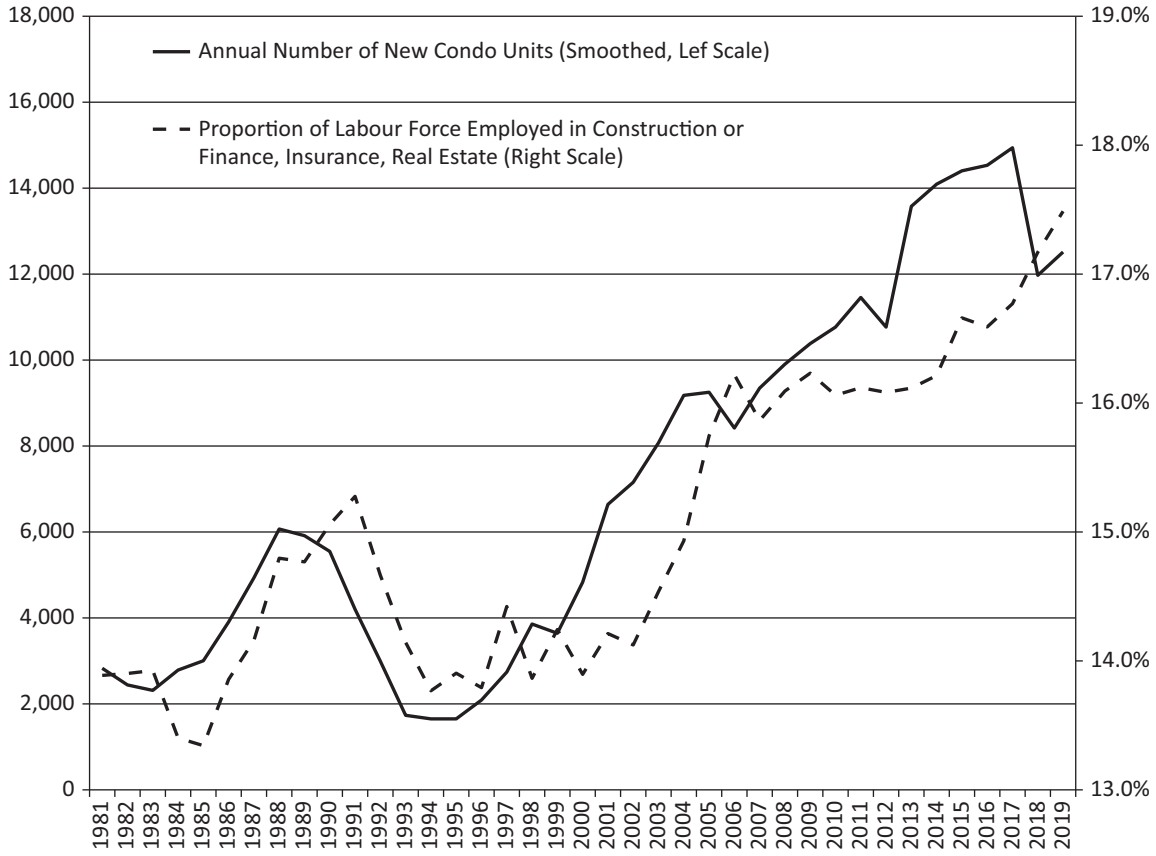

Figure 5. Annual new condo units in the City of Toronto compared to Toronto CMA jobs in the FIRE sector, 1981–2019. Source: Updated from Rosen and Walks (2015), and calculated by the authors using condo data provided by CMHC (2022), employment data from Statistics Canada (1981, 1991, 2001, 2006, 2011, 2016, 2022b, 2022c) as well as the City of Toronto (2020) for the years 2014–2019, with the years 2012 and 2013 estimated from the latter two sources.

condo development and, with it, employment in finance, insurance, and (especially) real estate. Pearson's correlation coefficient for relating these variables is a very high 0.901, suggesting that over 81% of the change in FIRE and construction employment can be explained by the change in condo development.

4.2. The Condoization of Toronto's Rental Market

The condo has also become a key force of restructuring within the wider rental housing market. With very little purpose-built rental housing constructed in Toronto since the early 1990s, the vast majority of new rental housing has been provided within the condo sector. By 2016, condominiums made up 24% of the City of Toronto's total housing stock (292,265 of 1,112,930 units), 18% of units in the City's rental market (92,658 of 525,835 units), and housed 16% of the renter population. Across the Toronto CMA, the average condo renter is younger, has a higher income, is more highly educated and likely to work in a high-status professional occupation, and is more likely to be a couple without children than other types of renters (see Table 1). In 2016, the average income of a condo renter household was mid-way between that of the average renter household and that of the average condo owner household. However, condo renter households actually exhibit slightly higher rates of university education and employment in high-status jobs than condo owner-occupiers, even paying slightly more per month for their shelter than condo owners.

These new rented condo units have only partially replaced those lost elsewhere in the private rental stock over the last three decades. Although approximately 66,000 units of *purpose-built* rental housing were constructed across the CMA region between 1990 and 2021, this has only resulted in an actual net gain of 23,879 new rental units as processes of gentrification and deconversion (of formerly rented units to owner-occupation), condo conversion (to owner-occupied condominium tenure), disrepair, and destruction have made their mark. This is despite the City's adoption of a strong rental replacement policy in its 1999 Official Plan amendment (OPA No. 2; Young, 2004).

As such, condominiums now represent the vast majority of new rental stock each year, accounting for the entire net increase in the new secondary market stock. While in 2011, 23.6% of the City of Toronto's condominiums were let on the rental market, a decade later, in 2021, this had increased to 36% (120,825 of 328,400 condos). In Toronto's core, this has been even starker. Almost half (43.7%) of condos in the Old City of Toronto were let on the rental market by 2020 (up from 29.6% in 2011; see Figure 6). In the decade between 2006 and 2016, a full 75% of the increase in rental housing in the City of Toronto was accounted for by condominiums, while 23% was in other forms of secondary rental stock (eg. rented houses, secondary suites, apartments above stores, etc.; Grisdale, 2021). Only 2% was added in the form of purpose-built rental housing.

As such, as suggested earlier by Lippert (2012), mapping new condo rental housing is, to a large extent, also mapping the geography of new rental housing and investor activity in the city (Figure 7). LQs were calculated for proportions of condo rentals at the census tract level across the Toronto CMA to identify neighbourhoods that experienced both an above-average increase in condo

Table 1. Selected demographics by housing tenure for the Toronto CMA in 2016.

Variable	Non-condo renter	Condo renter	Condo owner-occupier
Population	1,342,470	265,230	662,465
Households	584,495	130,925	314,725
Average household income ($)	56,921	74,795	95,282
Average monthly shelter cost ($)	1,181	1,635	1,612
Population has high-status occupation (%)	25	40	36
Population between 25 and 64 has university degree (%)	36	61	51
Primary household maintainer (PHM) is under 45 years of age (%)	66	77	51
PHM is a visible minority (%)	46	51	47
PHM is female (%)	49	44	47
Single person households (%)	38	40	40
Couples without children (%)	15	23	24
Bedrooms per household	1.8	1.6	2.1
People per household	2.3	2.0	2.1
People per room	1.2	1.3	1.0

Note: "High-status occupation" is defined in line with Walks and Maaranen (2008). Source: Calculated by the authors from Statistics Canada (2016).

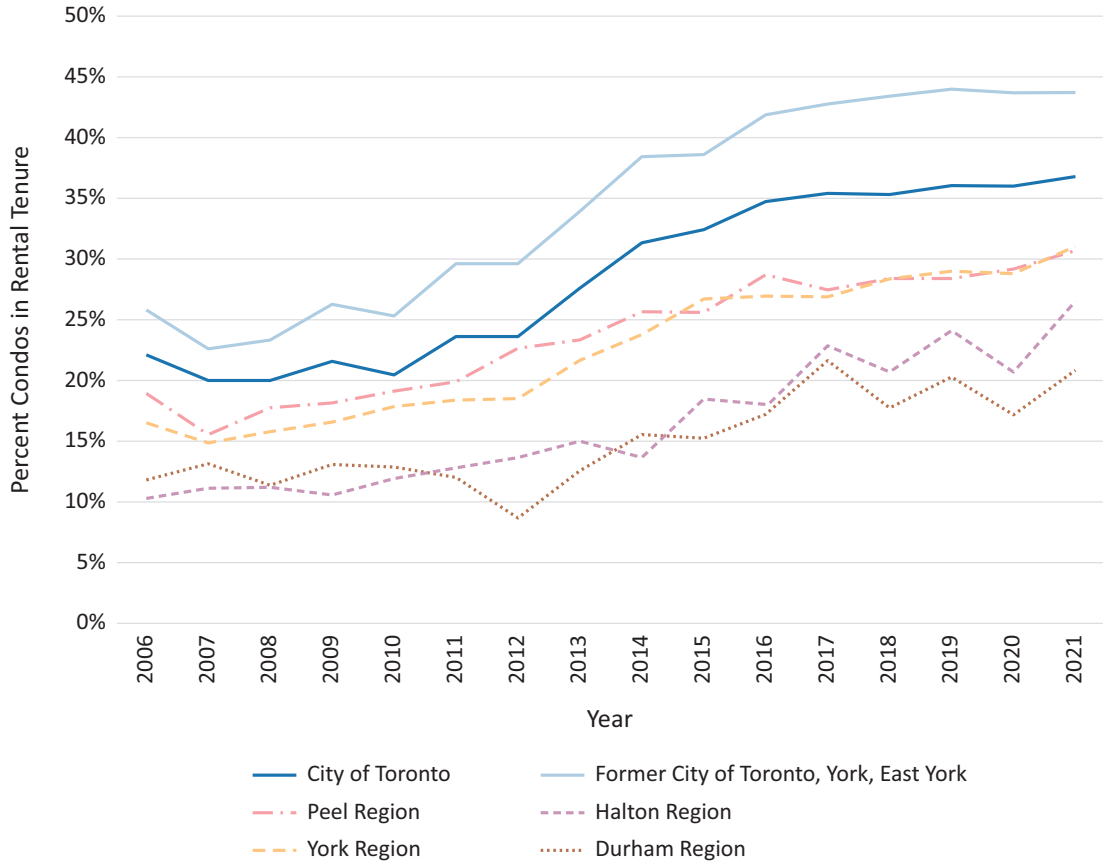

Figure 6. Percentage of condos in rental tenure by region in the Toronto CMA between 2006 and 2021. Source: Calculated by the authors using data from CMHC (2020b).

rentals over the period between 2013 and 2020 (with these LQs of 1 equivalent to a greater than 3% increase in condo rental stock and an increase of at least 115 condo rental units), as well as a possessing a higher total stock of condo rental units as compared to the CMA average in 2020 (where LQs of 1 are equivalent to an increase of more than 256 condo rental units, with at least 18% of condos in rental tenure). According to this analysis, new condos were found in 541 tracts overall, while 70 of these tracts across the Toronto CMA exhibited a "highly condoized rental stock" (LQs of between 1 and 2: light purple in Figure 7), and 34 tracts had a "very highly condoized rental stock" (LQ of 2 or greater: dark purple). These tracts show a high rate of proximity to the waterfront, to transit infrastructures, and to regional suburban cores with public transit stations. Virtually all of the new rental housing that is highly accessible to transit is being provided via high-rise condos.

4.3. The Condoization of Gentrification in Toronto

As condominium development has become ubiquitous across Toronto, it has become not only more important as a form of housing and as a key sector of economic growth but also for its effects on gentrification and neighbourhood change. The City of Toronto has for decades experienced some of the most rapid and extensive gentrifications of any city in Canada (Walks & Maaranen, 2008). Condominium development has increasingly shaped how and where gentrification is experienced. Of the 129 census tracts within Toronto's inner city that have experienced gentrification between the 1971 and 2016 census (the most recent census tract data on housing that is available as of writing), some combination of new condominium development and conversions of older buildings to condominium tenure features in fully 67 of these tracts (Table 2). This means that condoization is a force of gentrification in more than half (52%) of tracts experiencing gentrification over this period. This is a significant increase in the importance of condoization from earlier periods: Walks and Maaranen (2008) found that, as of 2001, only 36 tracts were identified as having some new-build gentrification or condo conversions. As Toronto has condoized, so too has gentrification become more condoized.

Income is one of the key variables employed for identifying social status change in neighbourhoods—one of the three axes of change that Ruth Glass (1964) noted as constituting gentrification. The contribution of condoization to income change is here calculated by comparing the change in the ratio of average income of all residents in a given census tract between 1971 and 2016, to the change calculated using only the average income of condo residents, multiplied by the proportion

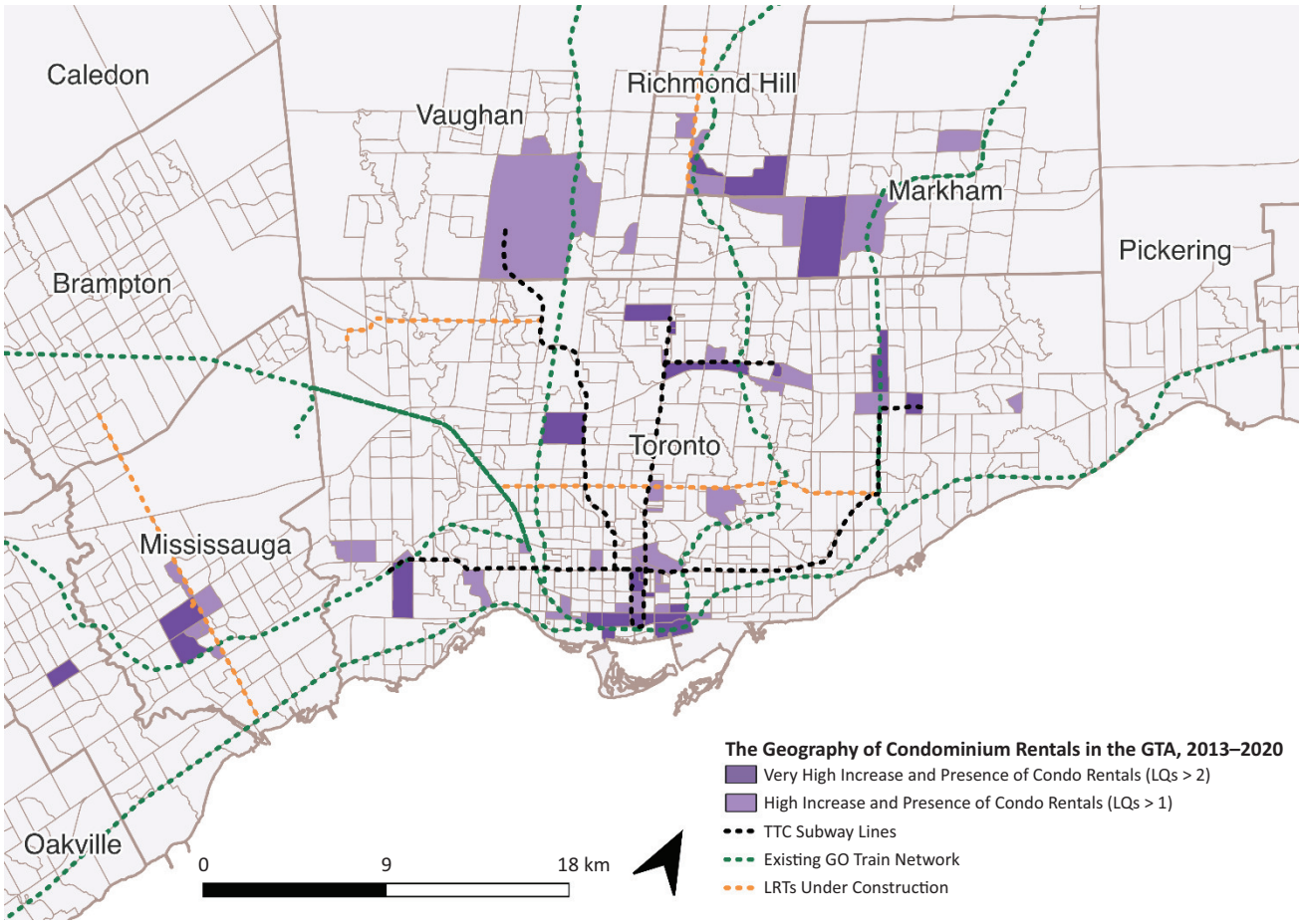

Figure 7. The geography of condo rental concentration in the GTA, 2013–2020. Notes: TTC refers to the Toronto Transit Commission subway system. The GO Train is the Government of Ontario commuter rail system. LRT stands for Light Rail Transit. Source: Created by the authors using custom tabulated census tract level data provided by CMHC (2020a).

of dwellings in 2016 that are in condo form. This is a similar method to shift-share analysis and the resulting percentage can be interpreted as showing the proportion of the total increment in the income ratio that is explained by the combined incomes and population size of the new condo residents.

A total of 86,528 new condo units were built in tracts experiencing gentrification between 2001 and

Table 2. Condoization and gentrification.

Predominant form taken by gentrification	No. of census tracts	No. of total households/ dwelling units	Condo share of units (%) in 2001	Condo share of units (%) in 2016	Increase in real average income (%), 1971–2016	Condo contribution to income change (%), 1971–2016
New build gentrification	22	80,633	12.4	55.5	30.4	43.1
New build + condo conversions	6	42,857	8.3	66.5	29.0	77.6
New build + condo conversions + standard practice	7	24,052	25.3	46.5	57.7	53.5
New build + standard practice	20	56,811	12.7	36.6	63.7	44.6
Condo conversions + standard practice	12	28,395	1.9	12.8	35.6	36.8
Standard gentrification (only)	62	119,126	1.1	5.4	32.1	6.95
Other trends (not gentrification)	394	823,867	9.6	22.0	23.1	−2.2

Source: Calculated by the authors using data from CMHC (2022) and Statistics Canada (1971, 2001, 2016).

2016, more than quadrupling the 28,760 condo units that already existed there in 2001. The vast majority (90.5%) of these new condo units (78,335) were built in census tracts identified as experiencing new-build forms of gentrification (whether alone or in combination with condo conversions of older buildings and/or standard forms of gentrification that involve deconversion of older rental housing to non-condo owner-occupied units). And over half of all housing units (51.4%) in neighbourhoods experiencing some level of new-build gentrification were in condo tenure by 2016.

When we estimate the contribution that condoization (both new-build units and conversion of older buildings to condo tenure) has made to gentrification using income as a key indicator of social status change, and decomposing income change into that reliant on the new condo residents versus that which has occurred regardless of condoization, we find that condoization accounts for 46.6% of the growth of real incomes (on average, relative to the CMA average income) in these tracts. The contribution of condoization is highest when both new-build development and conversions are present, in which 77.6% of the growth in incomes is explained by the new condo residents. These are areas with fewer standard forms of gentrification. As expected, the contribution of condoization is lowest in tracts whose gentrification has been predominantly driven by traditional/standard practices in which the older low-rise rental stock is deconverted to owner occupation as higher-status owner-occupiers move in and displace tenants: In these tracts, condoization unsurprisingly explains only 6.95% of the total income increase.

Figure 8 sheds light on how the geography of condoization—both owner and renter—maps onto the gentrification process, with the most central new-build gentrification tracts primarily characterized by rental tenure condos. It is notable that condoization accounts for much more of the income change in gentrifying tracts than in non-gentrifying tracts, even when the latter contains significant growth in condo units. That is, the effects of condoization are spatially differentiated, with condoization spurring gentrification within many inner-city tracts while capturing demand for lower-cost housing from lower-income households in the suburbs (Harris & Rose, 2019). This indicates a broader role of the condo in restructuring not only the gentrified space of the inner city but also the rental market across much of the City of Toronto and the suburbs as well. The difference in the

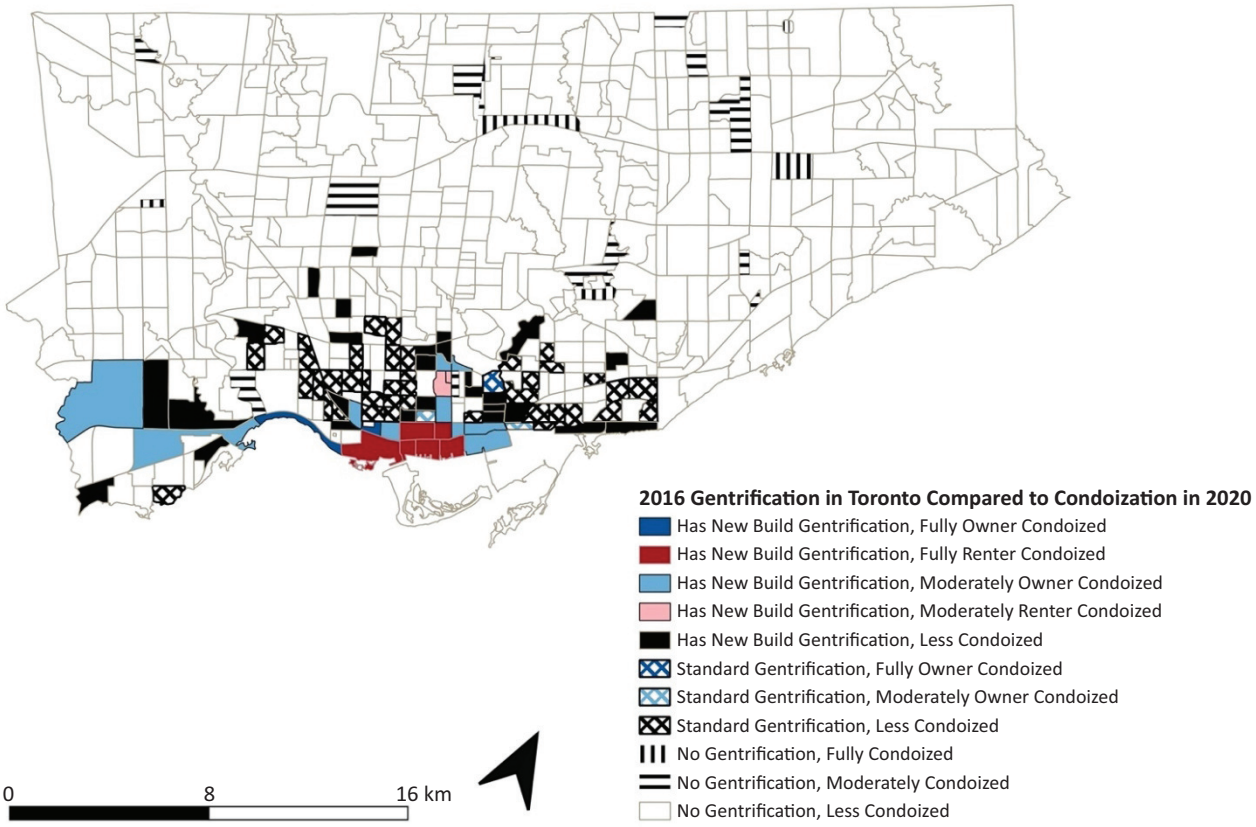

Figure 8. Condoization and gentrification typologies in Toronto. Notes: Tracts are indexed along three metrics—(a) the degree of condoization, whether the housing stock is fully (> 75%), moderately (50–75%), or less condoized (< 50%); (b) the predominant tenure of condos in condoized tracts, whether renter or owner; and (c) the primary type of gentrification in the tract (these were simplified to "has new build" for those tracts with new build gentrification as at least one type and standard gentrification/conversion for tracts with no new build gentrification). Source: Calculated by the authors using custom tabulated census tract level data provided by CMHC (2020a) and Statistics Canada (1971, 2001, 2016).

geographic effects of condoization suggests that condo developers and investors have sought to capitalize on the ongoing gentrification of the city and the demand this has created for inner-city living. In turn, condoization (often in rental form) has become a key force of gentrification in its own right (supporting the hypothesis of Lehrer & Wieditz, 2009). This is necessarily an initial analysis. Future research will examine spillover effects from tracts experiencing condominium development onto nearby tracts (the latter is out of the scope of this article due to length and the need for a completely different methodology).

5. Discussion

The condoization of Toronto's economy, its gentrification, and its rental housing market coincides with a housing system that has become increasingly unaffordable for both renters and owners. While this illustration is spatially and historically specific to Toronto, our findings suggest that reliance on condoism as a mode of urban development could have similar implications in other cities structured by similar institutions and political-economic conditions. Condominium housing has been a key recipient of investment brought about by the same financialization of housing that has led to rapid increases in the real cost of owner-occupied housing. And with the increasing dominance of condoism as a prevailing regime, Toronto's economy has become ever more dependent on condo development and ever more subject to the social and governance implications of this.

It is important to reiterate that condoization in Toronto has produced a rental housing system whereby most new rental units escape many of the protections historically developed for renters in purpose-built rental housing, largely because rent controls were specifically removed from new-build rental units (as noted above). The implications for renters in condominiums are exacerbated by the fact that owners can use their units for a number of purposes not available to owners of multi-family units. Lack of rent control means that tenants can be easily evicted from units (including through aggressive increases in rent), maximizing the flexibility that condo owners have over the use of their property. This flexibility is inscribed into the evolving verticality of the city, with condo units that are literally "floating in the air" (i.e., figuratively floating), shifting between the long-term and short-term rental markets and the ownership market as conditions change. If the owner of a purpose-built rental tower wishes to convert their units to condos, they are technically required by the city's rental replacement policy (Section 111 of the City of Toronto Act) to replace those rental units in the same area and to rehouse existing tenants in units at similar rates of rent. But individual condo unit owners are not subject to this legislation, so there is no control over evictions and displacement from the condo sector. Because of this, the condoization of the rental market has produced a less stable *quantity* of rental stock overall, engendering greater uncertainty in the availability and price of housing for renters.

This flexibility also means the condo sector can more easily absorb demand from higher-income households for inner-city space. A new middle class of renters increasingly represents a gentrifying force in downtown Toronto as homeownership has moved increasingly out of reach for even those with middle-class incomes. Condo renters are demographically distinct from other renter households at both the City and CMA levels, and within the inner city are disproportionately concentrated within the gentrifying core and near transit nodes and arteries outside the core. Consequently, as higher-priced rental condos are concentrated in the most accessible locations, lower-priced rentals and lower-income households are displaced to less-accessible locations as they now must compete with this newer class of people locked out of homeownership. In this way, the condo has become a technology of differentiating and dividing—spatially and socially—the tenant populations of Toronto within the rental housing system.

Further scholarly attention must be paid to the displacing force of condo rentals not only within the gentrifying inner city but also from transit infrastructures extending into the suburbs, where lower-income urban residents are increasingly displaced. There is a relationship between the verticality of the new inner city created by the "condo" that flexibly absorbs and caters to these new professionals and the displacement and dispersion of the working class, which is increasingly housed within condos at the urban-rural fringe, as well as within declining post-war apartment rental buildings within Toronto's inner suburbs. In this, the "condo" has been a key technology restructuring the social space of the third-wave city (Scott, 2011). Of course, the data currently available only allows us to ascertain the evolution of the condo sector up to the Covid-19 pandemic. The medium-term effects of the pandemic on the condo sector thus remain to be examined once the 2026 census data becomes available.

6. Conclusions

This article has examined the effects and importance of the condo as a force of city-building within the larger remit of third-wave urbanization, economic restructuring, and gentrification. Toronto, as a city and metropolitan region, exemplifies this shift toward condoism, and its housing system has increasingly become "condoized." In recent decades this has involved a dramatic transformation of the private rental housing market, as demand for new rental housing has been met largely through the incremental provision of condo units not officially targeted to the purpose-built rental market. It is through the extension and functional differentiation of the condo sector and form that a new ecology of rental housing is emerging, in which the ownership of rental units in

the city becomes much more opaque, diverse, privatized, and ephemeral. The vertical city that has arisen in Toronto is an outcome of this profusion of private high-rise units in condominium tenure.

As developers have eschewed building towers dedicated to rental housing, the supply of rental stock is increasingly dependent on individual investors buying units to rent them out (even while some may prefer to leave their units vacant). As such, the geography of new condominium rentals can also be understood as a geography of housing investor activity, marked not only by condo renter households, whose demographic profile maps onto those associated with the later phases of gentrification in being younger, higher income, and in higher status employment but also by the prevalence of short-term rental units and vacant housing (see also Grisdale, 2021). Condoization also portends a geography of working-class displacement beyond the gentrifying core, as lower-income residents are less capable of affording newly built condo rental units near access to transit and other new amenities in the city.

The condo also continues to restructure the processes of gentrification in the city. By 2016, a majority of tracts experiencing gentrification in Toronto now relied on processes of condoization. One-third of units in all neighbourhoods experiencing gentrification were in condo form by 2016, while condos made up the majority of units in those census tracts experiencing gentrification driven by new build development or conversions of older buildings to condo tenure. Condoization (either the building of new condo units or conversions of older buildings to condos) accounts for almost half of the total increment in real incomes among residents in these tracts—one key indicator of gentrification. Future studies will also need to examine spillover effects on neighbouring tracts, which will certainly increase the estimated effect of condoization on gentrification processes within the inner city. Our analysis here is, therefore, necessarily conservative. This process is novel in that this gentrification is driven not only by owner-occupiers but by renters as well—with almost half of the condos in gentrifying tracts rented on the private long-term rental market. Further research (both qualitative and quantitative) on these processes is warranted, not only in Toronto but other cities in Canada and around the world experiencing ongoing condoization of their housing markets.

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Conflict of Interests

The authors declare no conflict of interests.

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Article

Young Families and High-Rise: Towards Inclusive Vertical Family Housing

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Abstract
In the near future, the vertical dimension of housing will become increasingly important. But high-rise housing is still being seen as not only inconvenient but also as inappropriate for young family households. This article aims to contribute to the vertical turn in the urbanism debate from a family point of view. The focus is on large western-industrialized cities. This literature-based article consists of two parts. The first part starts with the deconstructing of families' position in urban high-rises. It is argued that young families have an "uneasy" relationship with urban high-rises due to the neglected presence of children. The dichotomous ways in which we define children and cities ultimately define city children and vertical living families as out-of-place. The second part of the article searches for ways to reconstruct families' relationships with high-rises. Based on an analysis of the literature, problems of vertical family living are identified, and possible solutions are discussed on both the geographical scale level of the apartment and the building. The summarized conclusion from the literature is that vertical apartment living and happy family life are not necessarily at odds. The building of family-inclusive high-rises is both in the benefit of urban-oriented families *and* cities.

Keywords
city children; high-rise housing; vertical family living; young families

Issue
This article is part of the issue "Vertical Cities: The Development of High-Rise Neighbourhoods" edited by Brian Webb (Cardiff University) and James T. White (University of Glasgow).

1. Introduction

In western-industrialized countries, high-rise housing already has a long history with two periods of sharp growth. The first period with growing numbers was during the decades after the Second World War (Costello, 2005; Gifford, 2007; Wassenberg, 2013). From the 1950s till the early 1970s, high-rise housing was part of modernistic architecture meant to solve the postwar need for housing (De Vos, 2015). Within the CIAM tradition of functionalistic building, high-rise was meant to attract broad categories of the middle classes. It turned out to be different, however. Part of the new flat buildings was constructed in central urban neighbourhoods, but a great many were located in peripheral neighbourhoods and attracted predominantly the urban poor. It did not take long before those postwar apartment towers knew a concentration of problems (Kearns et al., 2012). High-rise became associated with criminality, poor safety, pollution, over-population, and, particularly for children, an unhealthy environment to grow up (Brownlee & McDonald, 1993; Stevenson et al., 1967; Whitzman & Mizrachi, 2012). Analysis of the literature, however, reveals that many of the problems with raising children in high-rises had more to do with the disadvantaged social position of the families than with the high-rise as such (Van Vliet, 1983). Nevertheless, many high-rise housing estates have been demolished and replaced by low-rise buildings or single-family homes (Wassenberg, 2013).

Today we are again in a period of massive housing need. Worldwide, we see ongoing pressure on cities to build for constantly growing populations. The need for more housing goes along with an increase in sustainability demands. Latest compact city policies meant to prevent urban sprawl have created a second period of sharp growth in the building of high-rise housing. But compared to the early postwar period, the recent high-rise is more often located in inner-city areas, is more often

owner-occupied, and has more often a luxurious appeal (Costello, 2005). The penthouse has become the ultimate representation of new modern ways of living high. Even in countries like Australia and the Netherlands that have hardly any tradition with high-rise housing, it is becoming more widespread. It is predicted that in a city like Sydney, in the near future, family households will also increasingly live in (high-rise) apartments (Andrews & Warner, 2020; Krysiak, 2019). Amsterdam has been characterized by a strong taboo on high-rises, partly due to the negative experiences in the southeast part of the city, but Amsterdam is now building a whole new island with only high-rises (Gemeente Amsterdam, 2016). In many western cities, high-rise housing has become part of the re-vitalization policies of the (inner) city by providing owner-occupied apartments for the (upper) middle classes. The change of character of today's high-rises has ultimately resulted in a change of appreciation. High-rise has become more popular than in the past and is more often associated with luxurious lifestyles (Costello, 2005; Graham, 2014).

Growing numbers of more expensive high-rise apartments have changed its formerly negative image. However, the negative connotation of high-rise housing regarding the raising of children has not changed, at least not in western industrialized countries. Although families with young children have always lived in high-density urban settings, high-rise housing is still being seen as not only an inconvenient but also an undesirable housing solution for young families. The negative discourse around high-rises and raising children is found among policymakers, urban designers, and real estate agents (Fincher, 2004) but also among families themselves (Bugera, 2020; Kerr et al., 2021). Newly built high-rise estates are predominantly marketed as design-led fashionable dwellings that respond to the luxurious taste of rich young childless households. There seems to be a serious tension between the present discourse of urban revitalization and the discourse on raising children. Families are not among the target group, and that is surprising given that we see a growing interest of young families wanting to live in urban areas (Karsten, 2007; Lilius, 2017). Thus, on the one hand, we observe an increase in urban apartment buildings and a growing interest of families in urban living, and, on the other hand, we notice a neglect in urban policies to accommodate vertical family living.

Within the context of urban densification, the vertical dimension of housing will become increasingly important. That makes it only more urgent to discuss families' position in high-rises. With this article, we aim to contribute to the vertical turn in the urbanism debate (Hadi et al., 2018; Harris, 2015) from a family point of view. It is based on an analysis of the literature. The literature review presented has two limitations. First, there is a geographical limitation—The focus of this article is mainly based on studies in western-industrialized capital cities. Research has made clear that within the geographical context of Asia, family housing in high-rises is broadly accepted as appropriate (Appold & Yuen, 2007; Karsten, 2015). This knowledge underlines the project of this article: Discourses on urban high-rises and young children are socially constructed and vary across space. A second limitation of this literature review is related to definitions of high-rise that are often vague and/or vary considerably. High-rise, apartment buildings, high-density housing, and flat building are used interchangeably (see also Van Vliet, 1983, p. 222). In addition, what is defined as "high" is very much context-dependent. In cities dominated by low- and medium-rise apartment buildings, a residential building of six floors is "high." All studies referred to in this article have in common that they focus in different terminology on vertical living families who do not live on ground level, do not have direct access to the outdoors, and experience the world from above.

This article consists of two parts. It starts with the deconstruction of families' "uneasy" relationship with high-rises (Section 2). It will become clear that this "uneasiness" is related to the dichotomous way in which we define children and cities and ultimately results in defining city children and urban family life as out of place. Nevertheless, many children grow up in cities and in high-rise apartments. How are they doing, what problems do they encounter, and what solutions have been found to reconstruct vertical family living in more harmonious ways? With the answering of these questions starts the second part of this article. This will be done on two geographical scale levels: that of the apartment (Section 3) and that of the building (Section 4). The concluding section of this article (Section 5) summarizes the results of this literature-based article by reconstructing family-inclusive high-rise housing, both for the benefit of families *and* cities. It will become clear that through changes in urban policy and architectural design, much can be achieved to better accommodate vertical family living.

2. Cities and Children

What makes families' relationship with high-rises specific? The answer is children. Families are different from other types of households because they have children that must be taken care of. And as most of the high-rise housing is being built in (big) cities, it can be argued that to understand families' relationship with high-rises, it is necessary to first reflect on the relationship between cities and children. What layered definition of cities and children exists? What defining elements constitute the two concepts (Table 1)?

Cities are defined as big entities where many people live and work. In addition, cities are the heart of the public domain with their political debates, cultural activities, and a wide variety of shops and services. Urban environments consist primarily of apartment buildings of varying heights lined along multi-functional streets and squares with many different facilities and services.

Table 1. Defining elements of cities and children.

Cities	Children
Big	Small
Work	Play
Public domain	Private domain
Multifunctional environment	Monofunctional environment
Apartment building	Single-family house
Stones and asphalt	Green and nature
High-density	Low-density
Anonymous and diverse	Familiar and homogeneous
Urban jungle	Rural idyll

Urban environments are densely built and made up of stones, concrete, and asphalt. Residents have diverse backgrounds and live close together but often do not know each other very well.

Children are primarily defined as small, not big, and vulnerable. They are supposed to play, not to work. And they have to be taken care of first and foremost in the private domain of the family. The single-family house is traditionally seen as the optimal housing condition for raising children. Low-rise green neighbourhoods with a limited number of (potentially disturbing) facilities are seen as attractive environments for children. Most important is the social context of familiar others (Kerr et al., 2021). The sum total of these layered definitions is that children would thrive in countryside-like environments summarized as rural idylls, while cities are described as urban jungles that may be attractive for some people but difficult to survive in for others, particularly so for children.

These dominant discourses on cities and children very much originated in the middle classes but have an influence on the lower classes as well (Jarvis, 2013; Raynor, 2018). Cities are not considered to be suitable places to grow up, and subsequently, urban high-rise apartments are not seen as appropriate housing for family households (Easthope & Tice, 2011; Kerr et al., 2021). Urban high-rise environments are even considered to be unhealthy and dangerous (Van Vliet, 1983). The sum total is that discourses on raising children are spatially related to the rural idyll (Valentine, 1997), which is defined as the absolute opposite of the urban jungle (Emmelkamp, 2004). Cities and children turn out to be two mutually excluding concepts.

The dichotomous conceptualization of cities and children defines city children and vertical living families as out-of-place. And, indeed, since the suburbanization from the 1960s onwards, urban family living is increasingly considered to be problematic and many families, particularly the ones who could afford to do so, left the city for the suburb. Families started to buy themselves a single-family home in the suburbs with easy access to ample green outdoor space. Suburban mothers were made the first responsible for the upbringing of the children, while their husbands made long working hours in central cities' labour market. The gendered character of the suburbanization process was conceptualized by Saegert (1980) as a dichotomy: masculine cities versus feminine suburbs. Suburbs became the child-rearing factory of society (Ward, 1978). Family households became a minority in large cities.

Over the last decades, however, families have started to re-claim the city (Karsten, 2007). Today, we see a new development of middle-class families opting for the city as a family place to live. This is a trend of families that can afford to buy themselves a suburban home, but who decide not to do it and to remain living urban. The number of urban families started to increase again, and the same applies to the number of children growing up in specific neighbourhoods of large cities. This reclaiming of the city as a family place to live is visible in many European capital cities (Authier & Lehman-Frisch, 2013; Boterman et al., 2010; Butler, 2003; Hjorthol & Bjornskau, 2005; Lilius, 2017). Families reclaiming the city: What does that mean for the families' supposed uneasy relationship with high-rises?

To answer this question, it is good to realize that housing aspirations constitute two dimensions: site and situation (Paleo, 2006). Site is the set of properties or conditions in a certain location and its immediate environment. Site refers to the lowest geographical scale level of dwelling, building, and estate. Situation is the set of conditions of a place derived from its relationships with distant, imprecise areas or places. Another word for situation is location. With families' reclaiming the city, changing aspirations in terms of locational preference have become manifest. This changing locational preference towards urban environments has much to do with (the growth of) working parenthood. Families consist of working parents who have to combine care and career daily. For working families, an urban central location has locational advantages with shorter distances to work, school, and a broad range of facilities and services. The re-claiming of urban environments by families can be considered a historical change away from the traditional gender division of tasks and its related suburban housing *situation*. But does this new trend also include new preferences in *site* qualities?

Urban families' site preferences can be summarized as a big-enough dwelling in a physical and social

environment that is called "urban haven" (Karsten, 2009). Physically, urban families look for a place to live in quiet, low-traffic streets with broad sidewalks and green elements. Socially, families like an environment where residents are closely connected with neighbouring family households within an overall diverse and lively urban context (Thomas, 2021; Tucker et al., 2021). The central question is thus whether high-rise housing estates can become an urban haven setting and meet the site qualities families prefer. To answer this question, I will first pay attention to the geographical scale level of the apartment and second to that of the building.

3. The Apartment

Decisions to buy or to rent depend in the first place on the qualities of the dwelling (Aner, 2016; Mulder & Hooimeijer, 1999). Literature shows that families living in high-rise apartments report three categories of problems. As a family, they have complaints about living too cramped, missing a good-to-use private outdoor space, and about feelings of being isolated.

The *size*, *lay-out*, and *flexibility* of the apartment are very much complained about by families *(*Bugera, 2020; De Ceuster, 2017; Marreel et al., 2019; Nethercote & Horne, 2016; Tucker et al., 2021). Generally, apartments are smaller than single-family houses, and family households need more rooms than childless households. Providing each child with a room of its own is vital for reasons of privacy for both the children and the parents (Marreel et al., 2019). The number of rooms is more important that the total number of square meters. Designers should therefore focus on the design of intelligent layouts without spoiling too many square meters in luxurious halls and second bathrooms. A functional focus will also help to solve another problem that is often complained about: the lack of storage. Apartments have no attics, garages, or gardens. Space to store needs to be found elsewhere. Storage may be provided for in the private apartment but can also be accommodated in specific parts of the building (see Section 4). Nethercote and Horne (2016) show that cramped-sized apartments force parents to re-order constantly the available space. That is very energy demanding. Like all families, apartment families struggle with "the colonization of the living room by children" (Nethercote & Horne, 2016, p. 1592). Negotiations about what activity is where and when allowed (time zoning) can only be successful when there is an alternative available. Flexible floorplans are seen as supportive to manage with limited square meters.

Private outdoor space is very often signaled as a problem by families living in apartments. Balconies are not always positively experienced. Complaints are related to the size, that often does not accommodate more than two people, and the climate in terms of being too windy or the absence of sun. In addition, children's safety on the balcony is very much worried about. Parents are afraid of their child falling from the balcony. To prevent childhood injury, balcony rails should be spaced less than 10 cm apart (Istre et al., 2003). But it is exactly the balcony that also can reduce the resistance against vertical living. A well-sized balcony with a nice view is the most positive experience of high-living. In his study on verticality as practice, Baxter (2017) shows that people who live high are inclined to position furniture in a way that they can optimally enjoy the view. Families are proud of their unlimited view that also gives them lots of privacy, or as one vertical living Amsterdam mother explains: "When I bike through the city and I see all those small streets, you need curtains to prevent that the neighbours are looking into your house. That feels so claustrophobic. We hardly have any curtains!" (Bugera, 2020, p. 30).

Feelings of isolation are reported by many residents in high-rises, or, as Graham (2014, p. 257) writes, "Vertical living can quickly turn into vertical isolation." For families, however, there is an extra risk due to their being a small minority (Warner & Andrews, 2019). That makes the building of social relations difficult, particularly for the children involved (Bugera, 2020). The underrepresentation of family households is a result of the total neglect of families as one of the purpose-groups to rent or to sell apartments. Only very few developers are consciously marketing to families. They do not see it as a viable option (Costello, 2005; Fincher, 2004). Kerr et al. (2020) reveal that parents in high-rise face negative judgements and have the feeling that they have to legitimate their "choice" for apartment living. The discourse on vertical family living is fairly negative. This negative discourse, however, changes when more families are grouped together in one building, as the case of Vancouver illustrates. Part of the family household in high-rise Vancouver could be labeled as "won over": They are "seduced" by the presence of neighbouring families and the high level of shared amenities in the building that support parenting (Thomas, 2021). If more families are attracted to new high-rise developments, vertical family living has the advantage of smaller distances to acquainted households. It becomes rewarding for children that have playmates nearby. And, as one Vancouver mother explains, "parenting can be very isolated and this housing helped 'to preserve sanity'" (Thomas, 2021, p. 24).

To reach the goal of a minimal number of families, the advertisement should mention the apartment as a suitable or even attractive type of family housing. It would help when the apartments are inclusively meant for families with children. They should be represented in texts and photos on the website of the real estate agency. Specific advantages of apartment living for families should be explained, such as the aforementioned short distances to facilities and friends. Some cities, among them Toronto (City of Toronto, 2020) and Vancouver (Beasly, 2006), have already started to explicitly market to families in newly developed high-rise estates. The grouping together of purposely designed family apartments can help to establish a nearby network

of like-minded households. Instead of feelings of isolation, a group of nearby living families can add to mutual understanding for children being sometimes noisy or badly behaving. That helps reduce feelings of guilt, shame, and stress (Kerr et al., 2021; Warner & Andrews, 2019).

4. The Building

It is not only the apartment itself that determines whether high-rise housing suits family life, but also the apartment building and the immediate environment of the housing estate. Literature shows that on this geographical scale level, families' inconvenient relationship with high-rises is related to children's problematic outdoor play, the lack of social connectedness, and the missing of shared facilities.

Families have children who want to play. It is often argued that it is primarily the lack of possibilities for *outdoor play* that results in a negative evaluation of high-rises by families. Several studies indeed indicate that children growing up in high-rises play outdoors less than children growing up in low-rise housing (Agha et al., 2019; Kearns et al., 2012; Whitzman & Mizrachi, 2012). The frequency of children's outdoor play is very much influenced by two components: the availability of playmates and the availability of space. The number of playmates living in the same building is crucial for apartment children's outdoor play. Theoretically, the higher the density, the higher the probability of easily meeting other children. There are stories told by children that precisely indicate the advantages of growing up in high-rise or high-density settings with many children living nearby (Krysiak, 2019). There is hardly anything more favourable for children than friends to play with who are easily accessible in the same building. But this all depends on the policies to attract a sufficient number of families to high-rises (see Section 3) *and* the supply of space to play.

In many housing estates, children's need for play space is only recognized after the finishing of the construction, as families are not supposed to live in high-rises (Carroll et al., 2011). Focusing inclusively on family households is needed to secure enough play space for the children. That can take many forms both inside and outside the building: the entrance, the gallery, communal rooms, inner court gardens, and "real" playgrounds. For reasons of safety and supervision, space to play should be near the home, because children are more easily allowed to play outdoors when within sight of the parents (Marreel et al., 2019). This may be a reason to group families together on the lowest floors of the high-rise. Outdoor play space that cannot be supervised from the apartment feels as unsafe for parents with the result that children are kept inside (Brownlee & McDonald, 1993; De Ceuster, 2017). Concrete high-rise buildings can best be compensated for by green environments that also offer a great opportunity for play. Andrews and Warner (2020) found that the location of the building in green nature-like settings was most appreciated by families. An Australian mother quoted in their article noted: "I love living next to the river, I think that's perhaps the best part about living where we do" (Andrews & Robson, 2020, p. 271). Design should further take care of possibilities for children to go out of the building on their own. That means that lift doors cannot be too heavy nor lift buttons too high. Creating good possibilities for children's play can be further stimulated by creating attractive places for parents to sit and meet near places where children play. In a Turkish study, Gur (2019, p. 749) reveals that relocated families who are new in a high-rise particularly missed the shared space in front of their former houses where everyone used to meet: "We always used to look after each other's children….Now we do not even know each other or what others do." Play spaces function to build new social networks for both the children and the parents.

Creating good opportunities to play in high-rise housing estates is not an easy task. There are many failures when it comes to accommodating children's play in high-rises. When it is not clear where the children are allowed to play, conflicts between groups of residents may arise. Bugera (2020, p. 41) quotes an Amsterdam mother: "In our inner court it is almost forbidden to play. The older residents have the opinion that it is a beauty garden not a play garden." In some estates, the banning of play is officially regulated (Easthope & Tice, 2011). Fear of noise, vandalism, and other annoyances is mentioned as a legitimate reason. Possible disturbance is something to think of already in the first steps of the designing process. When this is not done properly, children's play may be banned entirely with explicit texts on placards like "this courtyard is not for ball games."

A lack of social connectedness stems from the lack of overlapping time-spatial routines among residents of the same building. Everyday routines have a great influence on who you get to know and who you will never meet. In many high-rise buildings, big numbers of residents live together without knowing each other. Living anonymously may sometimes feed criminality (Gifford, 2007) and is often detrimental to a sense of home. When an Amsterdam apartment family compares their actual apartment with their former living place, they regretfully remark: "It is more anonymous here, that corridor with all doors. You don't hang around, it is all functional….That is how an apartment works I think (Bugera, 2020, p. 48). Overlapping time-spatial routines of a limited number of households is essential to create a first level (superficial) of social connectedness (Forrest et al., 2002; Huang, 2006). To build on public familiarity among neighbours (Blokland, 2003), it is best to provide spaces in the building where only a limited number of residents meet. Instead of one big parking plot, separate parking spaces for the residents of specific floors should be created to help construct a recognizable—not too big—group of neighbours. Clustering residents that feel familiar with each other may also help to reduce fear of crime

that often outstrips actual crime rates (Gifford, 2007). Instead of one entrance with lifts for all, it may be better to link specific lifts to specific floors. That makes it easier to learn to know the neighbours. For families with children, the lift is particularly important. They should feel secure that their children are not being locked up in the cabin or being harmed by unknown people. Badly functioning lifts are one of the reasons why children are prohibited to play outdoors (Carroll et al., 2011; Churchman & Ginsberg, 1984).

To support neighboring among vertical living households, the availability of *shared spaces* is important. Neighbouring is beyond knowing by face: It is about socializing, doing things together, and helping each other. These community activities can be stimulated by offering shared spaces of different types. Shared functional spaces like extra storage, collective guest rooms, and common places to park buggies or bikes require residents' engagement in setting the rules, complying with the rules, and addressing eventual misuse. Shared social spaces to play, cook, and eat together are purposely meant to build community. Many apartments are too small to invite big groups. Communal kitchens and playrooms help to accommodate the social gatherings of neighbours, both parents and children (Warner & Andrews, 2019). Communal gardens to play and grow vegetables and plants are another successful example of shared social space in high-density contexts (Krysiak, 2019). Sharing not only stimulates the building of social networks but, as Nethercote and Horne (2016) show, shared spaces also save money, time, and worries (see also Jarvis, 2011).

Providing good functioning communal spaces in high-rise housing is not easy. There are many problematic examples often related to the size of the group of residents involved (too big) and the diversity of the residents (too diverse) engaged (Wassenberg, 2013). Smaller groups of like-minded people work best to create a sense of ownership that makes residents feel responsible for "their" shared space (Marreel et al., 2019).

5. Concluding Reflections: Towards a Reconstruction

Sustainable policies are such that many major cities are no longer "allowed" to only expand outwards. Building in higher densities, including high-rises, will dominate the urban agenda in the near future. With this future in mind, it is needed to pay attention to families and children's position in high-rises. In this article, it is highlighted that they have only a marginal position in the development of high-rises. It is argued that the dichotomous way in which we define children and cities ultimately defines city children and vertical living families as out-of-place. Present exclusionary policies and practices are detrimental to both cities and families. Diversity is at the heart of the urban. Good cities are diverse places in terms of class and ethnicity but also in terms of age and type of household. Young children and family households should have access to cities like childless couples and singles. And, as Easthope and Tice (2011) argue, narrow planning assumptions about high rises as not for families have already too often resulted in limited facilities for families and children growing up in high-rise residences. In today's urban planning, family and high-rises need to be reconciled.

Families themselves already started to do so. The number of families choosing to live in urban settings has increased. This trend can be considered an important locational change in families' housing preferences. Among young families, there is a group that is seriously interested in urban housing locations. Besides locational preferences, it is the qualities of the site that determine whether families are attracted by centrally located high-rise developments. In this article, it is identified what site qualities should be taken into account to really address families' housing needs.

Both in the design of the apartment and the building, several improvements can be made to better accommodate urban family life. The apartment should be designed with children in mind. It is clear that families need more space than childless households. Each child needs a room of its own. The layout of the apartment should support flexible use and contain space to store family equipment. Big enough and safe private outdoor space is an additional basic requirement for family households. Also, the building and the housing estate can be better designed in ways that support family life. Limited space within the apartment can, to a certain extent, be replaced by facilities in the building and the immediate environment of the housing estate. Play spaces for children are of the utmost importance, particularly outdoor green play space that compensates for the concrete high-rise buildings. Parental supervision from the lowest floors should be made possible. Challenging low levels of social connectedness among the residents of high-rises overlapping time-spatial routines is essential. Attention is needed for the maximum number of people that are supposed to use entrances, lifts, and corridors. Those numbers should not become too high in order to make it possible for residents to at least have a superficial knowledge of each other and can recognize each other as neighbours. Social connections can be further intensified by building various shared spaces, from communal gardens to communal kitchens. These recommendations all contribute to creating family-friendly high-rises and, in so doing, reconstructing families' relationships with high-rises in positive ways.

Positive changes will require big efforts to better suit the design of the apartment and the building for families. In addition, families should be explicitly marketed as one of the purpose groups of the newly developed housing estates. These efforts will not win over every family, but they will help to further support families' diversifying housing aspirations. Not every family is attracted by suburban or rural environments. The summarized conclusion from the literature is that vertical apartment living and happy family life are not necessarily at odds.

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Conflict of Interests

The author declares no conflict of interests.

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Article

Negotiating Vertical Urbanization at the Public–Private Nexus: On the Institutional Embeddedness of Planning Committees

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Abstract
While the planning and development of dense and high-rise neighborhoods are commonly perceived as primarily technical procedures, the past several decades have highlighted the growing social complexity of these processes. Neighborhood initiatives opposing development, as well as an increasing variety of public and private stakeholders involved in these processes, have led to the continual emergence of organizations that facilitate the production of urban density and verticality. Committees are founded to operate at the nexus of public and private development, while simultaneously promoting urban growth and public interests. Although they often are not formally recognized as political entities, they are constituted by political acts and hence influence planning processes. However, despite all the research into dense and high-rise neighborhood developments, academic interest has so far neglected the role of committees in these processes. This article aims to fill this gap by presenting an analysis of 23 committees engaging with high-rise housing and neighborhood developments in the three German-speaking countries of Austria, Switzerland, and Germany. First, it reveals the heterogeneity of committees, delineating four components for the institutionalization of committees. This is followed by an in-depth analysis of two committees in Austria and Switzerland, to demonstrate how these structural components influence the development of neighborhoods.

Keywords
Austria; committees; German-speaking countries; Germany; neighborhood development; Switzerland; urban densification

Issue
This article is part of the issue “Vertical Cities: The Development of High-Rise Neighbourhoods” edited by Brian Webb (Cardiff University) and James T. White (University of Glasgow).

1. Introduction

Vienna once aimed to have the world’s tallest timber high-rise building within its city limits. While it has never really achieved this—in part due to changes in the evaluation criteria of the Council of Tall Buildings and Urban Habitat, as well as a Norwegian project suddenly deciding to increase its height by 4.4 m (Linner, 2020)—the project remains indicative of the broader processes shaping Vienna’s political and economic landscape. High-rise developments and urban densification are the go-to concepts for urban regions looking to simultaneously tackle the challenges and seize the opportunities of urban growth. The upward trajectory of urban densification over the past few decades is illustrated by OECD data. OECD differentiates between three statistical types of city growth: towns growing into cities, city expansion through new neighborhoods on their urban edges, and densification within the existing boundaries of cities, the latter attributed to 60% of the population growth in OECD cities between 2000 and 2015, up from 50% between 1975 and 1990. City expansion through the development of neighborhoods is attributed to further 25% (OECD, 2020, pp. 102–103).

However, urban densification and neighborhood development are becoming increasingly complex

because of the rising fragmentation of planning processes (Parker et al., 2018), as well as the continued mobilization of "not-in-my-backyard" movements (Wicki & Kaufmann, 2022). Furthermore, topics such as affordable housing, social mixing, urban greening, and soil protection are becoming ever-more pressing in planning procedures, and hence specialized expertise is needed in the administration of planning and neighborhood development processes. Because of this rising complexity, a two-year-long research project addressed the role of inter- and transdisciplinary committees involved in urban planning.

While terms such as committees, commissions, juries, or panels are mostly used in a synonymous way, we use the term "committee" as an umbrella term for distinct groups of people involved in planning processes, such as juries of architectural competitions or design review panels. Committees are defined as "institutionalized interactions with the competence to prepare or make decisions within a predefined area of responsibility. Committees are either small or medium-sized groups, whose interactions take place within a certain frequency of meetings" (Weihe et al., 2008, p. 340; authors' own translation). Their institutionalization is formalized through political acts such as laws, ordinances, or resolutions across different administrative levels (Gobert, 2014, p. 22; Krick, 2013, p. 24), and thus committees are inherently of a territorial nature.

Our research demonstrates how the German-speaking countries of Austria, Switzerland, and Germany contain a wide range of inter- and sometimes even transdisciplinary committees, founded in order to influence these planning processes; in particular, they attempt to strengthen public interests in the public-private nexus in the development of dense and high-rise neighborhoods. This article, building on the notion of inter- and transdisciplinarity, focuses on how vertical urbanization is influenced by the institutionalization of committees, which act as a specific instrument of local and regional statecraft. After identifying 23 committees involved in planning, of which 15 dealt specifically with neighborhood-level development, we analyzed them in order to answer the primary research question: Which *structural components* that institutionalize committees in the planning system can be identified? To further elaborate upon these components, we analyzed in-depth two committees that specifically deal with vertical urbanization in Vienna and the Bern city-region to answer a second research question: How do these structural components influence committees dealing with dense and high-rise neighborhood development?

The article is structured as follows: We first present our conceptual framework relating to the political economy and governance of vertical urbanization, before deeper investigating the role of committees in these processes. Thereafter, our research questions and methodical approach are introduced. We then present our results in two empirical sections. The first is the identification and mapping of 23 committees, and the second delves into the detail of the *structural components* derived from this collection through two in-depth case studies. These are: (a) the Jury der Bauträgerwettbewerbe (Jury of the Housing Developers Competition; JHDC) of the Wohnfonds (Vienna Housing Fund; VHF) and (b) the Qualitätsteam Hochhausplanung (Q-Team Skyscraper-Planning; Q-Team) of the Regionalkonferenz Bern-Mittelland (Regional-Conference Bern-Mittelland; RCBM). The article concludes with a comparative discussion and an outlook for further research.

2. Conceptual Framework

2.1. Embedding Planning Committees Into the Governance of Vertical Urbanization

The increasing interest in urban studies into vertical urbanization is no coincidence since the 21st century has seen a constant shattering of the records for the tallest buildings. Even Europe, where skyscraper and high-rise developments have been less prevalent than in North America or Asia, has witnessed "its greatest ever period of high-rise construction" (Drozdz et al., 2018, p. 469). Critical scholars often focus on the neoliberal agenda under which contemporary dense and high-rise developments arise. What was once termed the "sustainability fix" by While et al. (2004), namely the incorporation of ecologic goals within economic interests, is being investigated in high-rise developments in places like Jakarta, where "proponents argue that high-rise buildings can solve the challenge of housing ever-increasing urban populations, are important engines of economic development, and are beneficial because compact cities are greener and more energy efficient than urban sprawl" (Liong et al., 2020, p. 1081).

While Nethercote (2018, p. 4), in her conceptual framework for the study of vertical urbanization, particularly focuses on the role of high-rise developments "as labour and capital intensive commodities; as investments on real estate markets increasingly tied to financial markets; and as cultural artefacts of distinction in inter city competition and geopolitics and in class relations," she also emphasizes the role of the state in shaping the local expressions of vertical urbanization (Nethercote, 2018, p. 22). Verticality and density in such a context are hence not only geometrical features but elementary conditions to simultaneously "tackle and facilitate urban growth, enhance the city's competitiveness, and satisfy development fervour" (Rosen & Charney, 2018, p. 539). In this, the (European) state is not a mere spectator, but a crucial actor in the promotion, enhancement, and distribution of growth in urban regions (While et al., 2013).

Under such an entrepreneurial urban agenda, planning instruments have experienced a general reframing and contribute to urban inequalities. For example, density bonuses (Karampour, 2021) or floor-area-ratios

(Liong et al., 2020) that were established to regulate density to promote public welfare have been used to "facilitate the profitability of real estate projects for developers and local government revenues" (Liong et al., 2020, p. 1073). Also, the management of design has been attributed to promote neoliberal practices of urban competitiveness (Chen & White, 2021, pp. 2–3) in the sense that "starchitecture" and "spectacle architecture" has led to uneven distribution and delivery of well-designed spaces that enhance the quality of life (Richardson & White, 2021, p. 4).

2.2. The Rise of Planning Committees

The systems of planning and design of urban space have been reframed under an entrepreneurial urban agenda to achieve and accommodate urban growth, with verticality playing a central role in this process. Simultaneously, a rise in the number of committees involved in planning can be observed, of which design review panels are probably the most prominent example. An upwards trajectory has been observed in the literature in countries such as the US (Agrawal, 2010, p. 398), Australia (Williams, 2014), the UK (Paterson, 2011; White & Chapple, 2019, p. 598), Germany (Förster et al., 2017, p. 7), and Austria (Raspotnig, 2007). Furthermore, design review panels are also slowly being adopted in countries such as India (Agrawal, 2010) and China (Chen & White, 2021). This increase has been attributed to a variety of circumstances. Richardson and White (2021), for example, see the rise of design review panels as a result of austerity and the shrinking of public sector planning departments in the UK. Williams (2014, p. 444), on the case of Australia, connects their rising prominence to a "lack of confidence by councils and state government in the quality of advice provided by council staff." Research in Germany, on the other hand, perceives the emergence of design review panels as coupled with growing awareness of the appearance of the built environment (the German term *Baukultur*, or building cultures, plays a critical role in this context; Förster et al., 2017).

Along with the increasing prominence of committees such as design review panels, critiques of these new instruments arose in the planning, design, and urban studies literature. Williams (2014, p. 445), for example, questions the example of design review panels in Australia and whether the "panelization" of planning and design governance is used to "push through locally undesirable development and planning proposals." However, research and critique on committees also illustrate the necessity to more deeply investigate their institutional embeddedness in the system of planning, design, and building provision. The institutional embeddedness, on the one hand, shapes the overall ability of committees to influence planning and design processes; on the other hand, it influences the efficiency of the planning system in general. Thereby Williams (2014, p. 427) notes how "the trend towards paneliza-tion is…symptomatic of an apparent inability of traditional decision-making structures to adequately handle contemporary planning and development matters" and further fragments decision-making, resulting "in a more complex planning system" (Williams, 2014, p. 444).

Insufficient or inadequate institutional embeddedness can also lead to committees and panels being viewed as anti-democratic and unclearly defined (Paterson, 2011), being influenceable by political leaders (Chen & White, 2021, p. 16), "not sufficiently open to public scrutiny" (White & Chapple, 2019, p. 598), as well as simply being ignored or dismissed by project applicants (Agrawal, 2010, p. 402). Furthermore, Paterson (2011, p. 101) notes that design review panels in the UK lack criteria to assess projects and have no relation to local or national planning policy, while Chen and White (2021, p. 16) found the opposite problem in China: "Normative urban design principles are widely used in national and local planning policy but they are not locally contextualized."

Another strand of literature focuses on the subjective and agency-dependent nature of how committees function and how they arrive at their conclusions and recommendations. White and Chapple (2019, p. 598) as well as Black (2019, pp. 5, 15–16) mention how committees and panels are influenced by individual agency and power relations that try to push through particular interests. They further emphasize the critical role of the chairperson in this regard. Silberberger (2011, 2012) investigates the iterative nature of how juries of architecture competitions come to their conclusions and sometimes deliberately depart from the original competition program. Also, a conflict of interests from panel members can occur, since most of them operate their own architectural offices, beyond their roles as part of juries (Richardson & White, 2021, p. 18). Therefore, White and Chapple (2019, p. 598) conclude that "if a panel is poorly composed, or does not have a good balance of skills, its effectiveness can be limited."

The trend towards dense and high-rise urban developments, as well as the emergence of committees as a popular instrument in planning, follow a similar temporal and directional trajectory. However, we argue that this co-emergence is interdependent and indicative of entrepreneurial forms of urban development. The institutionalization of committees is hence an important facet of understanding state intervention in vertical urbanization. Hence, in the following sections, we present a framework for the structural components of committees that are involved in the development of dense and high-rise neighborhoods.

3. Methodical Approach and Research Questions

The research presented here is part of a much bigger research project which specifically dealt with the role of inter- and transdisciplinarity in urban planning and neighborhood development. While institutionalization

and not inter- or transdisciplinarity is the focus of this article, it is still important to address the basic assumptions of the research project, because they influenced to collection and selection of our empirical examples:

1. Committees are founded to mediate and influence increasingly complex development processes of dense and high-rise neighborhoods.
2. Committees involved in dense and high-rise neighborhood developments have adopted an interdisciplinary composition to tackle the multiple challenges deriving from urban growth.

Based on these assumptions and the definition, we reached out to a network of 87 experts from academia and planning practice in the three German-speaking countries of Austria, Switzerland, and Germany to identify inter- or transdisciplinary committees involved in neighborhood development processes. We received 90 relatively institutionalized organizations and groups from our network, of which 23 aligned with the aforementioned committee definition (see Table 1). The other 67 organizations we received were either organizations bigger than the committees or informal networks of individuals. Fifteen of these 23 have a direct influence on the planning and implementation of neighborhoods; furthermore, most of them were established in the last 20 years, reflecting the dynamic we identified in the increasing emergence of committees. We then undertook a two-step analysis to answer our research questions.

First, it was necessary to obtain a clearer picture of the different institutional components of the committees. Therefore, we prepared a brief profile for each of the 23 committees by using available data from the internet and scientific databases and mapped them using different categories to answer the first research question: Which *structural components* that institutionalize committees in the planning system can be identified? Second, we chose two committees based on their involvement in the development of neighborhoods and their interdisciplinary composition. We analyzed these two committees by gaining data from 11 qualitative expert interviews and various types of documents (annual reports, evaluations, etc.) which we then coded using MAXQDA software. The in-depth analysis of these two committees allowed us to answer the following research question: How do these structural components influence committees dealing with dense and high-rise neighborhood development?

4. Classification of Planning Committees

4.1. Mapping: Approaching a Classification of Planning Committees

The 23 analyzed committees are displayed in Table 1 with some of the key characteristics. At first, they seem to display a high level of heterogeneity. While some are situated at the national level, others were institutionalized on a municipal or even directly at the neighborhood level. Some committees were able to directly make decisions while others were "only" able to give recommendations, often depending on the stage of the planning and/or permit process they are involved in. Also, from a processual perspective, there were significant differences between them. While many committees are only integrated into planning and building processes at singular points, others dealt with specific projects from the earliest planning stages until the completion of the whole neighborhood. As could be expected, interdisciplinarity was dealt with very differently. Some committees "just" included different planning professionals (architects, landscape planners, traffic engineers, etc.); other committees could even be described as transdisciplinary, by combining actors from academia, politics, and planning practice.

To provide an overview of the different types of committees, we mapped them according to a matrix with three different variables, using information from the profiles we developed for each committee. First, we sorted the committees on a y-axis with regards to the administrative and political levels they are attached to. Second, we checked which stage of the planning or building permit process the committee is involved in and mapped it on an x-axis, using the neo-performative model of spatial governance (Janin Rivolin, 2017, pp. 13–14). For the z-axis, we used colors to illustrate the committees' decision-making power according to Diller's (2019) classification of planning instruments.

The result of this classification is mapped in Figure 1. Of course, it must be considered that this classification is based on the relatively small sample of the 23 collected committees and needs further elaboration in the future. However, three abstract categories of committees can be derived from it. First, in the development of spatial strategies between the regional and the national level, committees can mostly be considered as methodical instruments that develop basic research for planning processes; or, they have a "procedural" nature, in that they are formed to network members across the multi-tiered levels of governance. This is especially important in federal countries like Austria, Germany, and Switzerland. In Austria, for example, ÖREK-Partnerschaften (partnerships) have been founded for the implementation of the goals of the Austrian Spatial Development Concept (ÖREK).

Second, during the process of acquiring building permits, various forms of quality control or advisory committees have been developed that are situated on either a federal state/cantonal level, a regional level, or a municipal level and are, in some instances, composed in an interdisciplinary manner, from planners of various disciplines to social scientists and real-estate economists. The recommendations of these committees are mostly non-binding and report to political decision-making bodies. Design review panels, for example, can also be placed in this category. The two case-study committees that are

Table 1. Overview of the 23 identified committees.

Name, city	Country	Administrative scale	Year of foundation	Number of members
Fachbeirat für Stadtplanung und Stadtgestaltung, Vienna	AT	Municipality	1929	12
AG Raumbedarf, Innsbruck	AT	Municipality	2020	8
Gestaltungsbeiräte	AT	Municipality	1983	Varying depending on municipality
Grundstücksbeirat, Vienna	AT	Neighborhood	1984	12
Bauträgerwettbewerbe, Vienna	AT	Neighborhood	1995	12
Aspern Beirat, Seestadt Vienna	AT	Neighborhood	2011	6
Raumplanungsbeirat, Vorarlberg	AT	Federal state	?	14
Österreichischer Beirat für Baukultur	AT	Country	2008	28
ÖREK-Partnerschaften	AT	Country	2011	8–20
Fachkommission Städtebau des Kanton St. Gallen	CH	Canton	2018	6
Stadtentwicklungs-Lenkungsausschuss der Stadt St. Gallen	CH	Municipality	2016	8
Stadtforum Zürich West	CH	Neighborhood	1996	49
Kernteams für Entwicklungsgebiete der Stadt Zürich	CH	Neighborhood	2001	6–8
Quartierkommissionen, Bern	CH	Neighborhood	2001	20–30
Qualitätskommission Agglomeration Freiburg	CH	Region	2018	3
Qualitätsteam Hochhausplanung, Region Bern	CH	Region	2009	5
Lares Gender- und Alltagsgerechtes Planen & Bauen	CH	Country	2013	10
Rat für Raumordnung, Schweiz	CH	Country	1997	14
Forum Pergolenviertel, Hamburg	DE	Neighborhood	2011	Varying
Konsortium Prinz-Eugen-Park, Munich	DE	Neighborhood	2016	21
Beirat der HafenCity GmbH, Hamburg	DE	Neighborhood	2005	12
Beirat für Konzeptvergabeverfahren	DE	Neighborhood	Since 1990	Varying depending on project
Ministerkonferenz für Raumordnung, Germany	DE	Country	1967	17
Beirat für Raumentwicklung, Germany	DE	Country	?	28

more deeply investigated in Section 5 both belong to this category.

Third, many committees that were founded in the last 20 years are committees that have procedural as well as quality-control elements, to guide and consult about singular, large-scale neighborhood development projects throughout the entire process, from the development of a spatial strategy to the final building permit approvals. Examples are the advisory boards for Seestadt Aspern in Vienna and HafenCity in Hamburg. In some instances, committees in these categories involved members from various planning disciplines as well as the social sciences. Committees such as the Stadtforum Zürich West or the Forum Pergolenviertel in Hamburg are composed in a participatory way with planning officials, politicians, as well as citizens.

4.2. Defining the Structural Components of Planning Committees

While we were thus able to identify specific groups of committees, our data did not reveal much about the institutional embeddedness of the committees. Referring to the definition by Weihe et al. (2008), formal institutionalization can be identified as the key characteristic to differentiate committees from other groups of

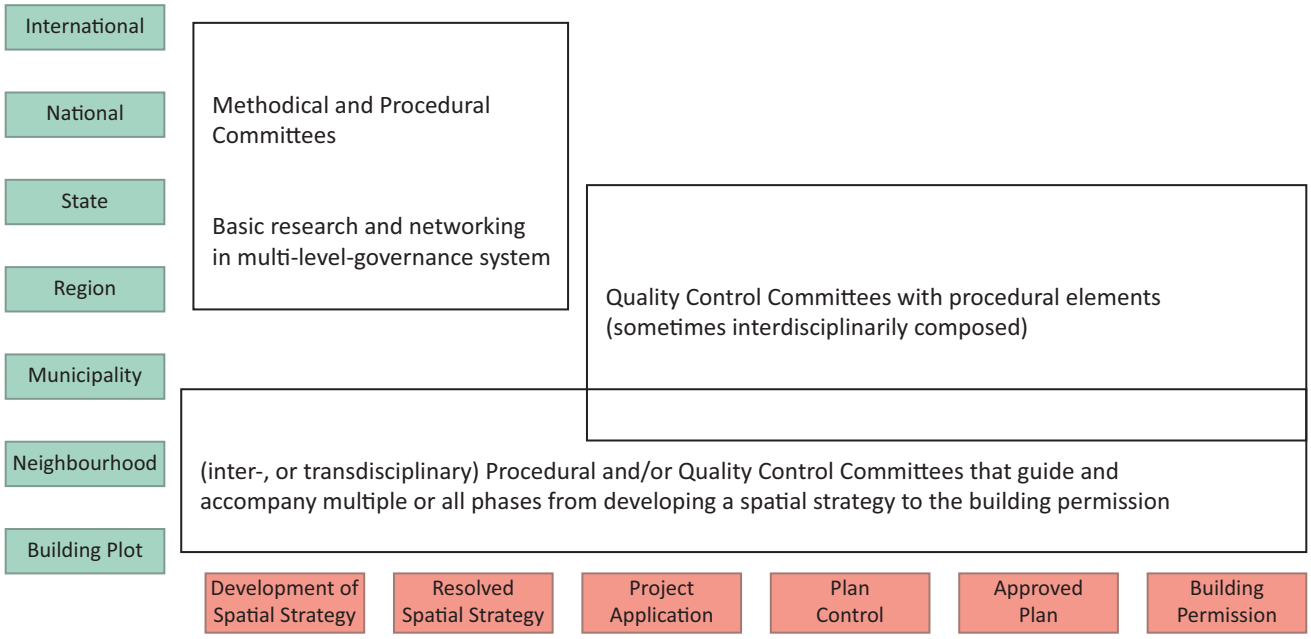

Figure 1. Classification of committees involved in planning and building permit processes in the German-speaking countries of Austria, Germany, and Switzerland.

individuals. In our cases, committees are mostly either founded directly by political acts (such as laws or resolutions) or, in some cases, as private clubs with a charter or statute (often incentivized by public funds). In both cases, formal institutionalization defines the number and formal roles of the members as well as the committees' spatial, temporal, and functional areas of responsibility. To further improve our understanding of committees and to develop some common components, we utilized additional literature from planning and political theory (Diller, 2019; Gobert, 2014; Nullmeier et al., 2008) as points of departure for how to analyze committees. By constantly comparing and iterating the profiles of the 23 committees with this literature, we were able to develop four "structural components" of committee institutionalization. Table 2 illustrates these components and their attributes.

If formal institutionalization is the prerequisite for a committee, this implies that other actors must have come to conclude that it is necessary to come together in the first place. This again implies that the committee is embedded within some broader form of social organization. We defined these characteristics in the components Setting and Scope and Scale. The term "setting" captures the political and administrative network within which the committee operates. While some committees are directly attached to political decision-makers, others work to connect different organizations. Most of the committees have administrative resources (personnel who prepare meetings and direct the committees' consultations to other relevant bodies) that directly connect the committee to the larger organization around them.

Scope and Scale entails the tasks, responsibilities, and competencies of a committee that are grounded in some form of territoriality. In many cases, committees have been founded to "work" at a new spatial scale beyond the traditional administrative levels of government. In the case of the German-speaking countries, the region or the

Table 2. Structural components and attributes of planning committees.

Components	Attributes	Original sources
Setting	Degree of embeddedness in the planning system	Weihe et al. (2008) Gobert (2014) Nullmeier et al. (2008) Williams (2014)
Scope and Scale	Definition of tasks and responsibilities Definition of spatial scale	
Temporality	Period of existence or period of office Frequency of meetings and stage of involvement in the planning process	
Decision-Making Power	Procedural committees Quality-control committees Methodical committees	Diller (2019) Gobert (2014) Williams (2014)

neighborhood would be such spatial scales that, up until now, there are no formal administrative levels. Besides the regional or supra-national level, many committees are also explicitly formed to deal with the neighborhood level, making Scope and Scale an especially relevant characteristic for neighborhood developments.

Committees are highly characterized by Temporality that has at least two manifestations. On the one hand, many committees are characterized by an inherently time-limited existence. After a certain period of time, either the mandate of personnel sitting on the committee ends, or the committee dissolves completely. On the other hand, temporality also refers to the point or period of time when the committee is dealing with at least one planning task, as well as its position within the various stages of the planning and building permit process. While some committees deal very intensively with only one planning project for a certain period of time, others meet regularly and have a changing agenda of various planning-related topics. Temporality hence depends on the committee's Setting as well as its Scope and Scale.

Finally, committees have some form of Decision-Making Power, through which they can influence planning procedures and shape entire neighborhood development projects. Devolving decision-making powers to committees is a highly political question; accordingly, a wide spectrum of different decision-making capacities was observed and could be grouped into three kinds of decision-making capacities. First, procedural committees have a controlling function in planning processes, by making final decisions or passing resolutions for the further progress of a planning initiative. Second, quality-control committees consult final decision makers such as mayors, heads of state, governments, or other procedural committees. Their task is to bring objective expertise into planning processes to ensure high-quality planning results. Third, methodical committees compile and provide data, reports, or analysis to inform planning processes with basic research; thus, they aim to increase the quality of the final decisions. Of course, hybrid committees that include more than one decision-making capacity do also exist.

5. Discussion of Case Study Results from Bern and Vienna

To further deepen our knowledge of these structural components, we chose two committees explicitly dealing with neighborhood developments in territories characterized by urban growth and whose members were selected in an interdisciplinary way. Both can be characterized as quality-control committees, which need to be integrated into planning and building permit processes as specific requirements arise. After briefly introducing the two committees (see Table 3 for an overview of the case study committees), we analyze how these components influenced the formation of interdisciplinary committees engaging with neighborhood developments, in a context of simultaneous growth-promotion and facilitation for both cases.

The first committee is the JHDC of the VHF. Vienna is frequently cited as one of the fastest-growing cities in Europe (Görgl et al., 2020, p. 378) and is widely considered a model for social housing policies. As the administrator of housing subsidies, the VHF plays an important role in this. The JHDC consists of an interdisciplinary team of 12 experts, who discuss and judge neighborhood development projects with more than 500 housing units, as well as projects where either building plots or VHF funds are used. In 2020, 1,737 housing units with a total volume of €232.1 million were built with VHF funds (wohnfonds_wien, 2021, p. 49).

The second committee is situated in the city-region of Bern, with a heritage of skyscrapers that were built between the 1950s and 1970s that is unique to Switzerland (Verein Region Bern, 2009, p. 2). Furthermore, the Bern city-region is still growing at a fast rate; Switzerland introduced some of the strictest planning regulations to protect soil and landscape in the last few years. Because of this heritage and pressure for development, the 75 municipalities assembled in the RCBM passed a skyscraper concept as part of their regional development plan in 2009. Therein, the formation of a quality-control committee for skyscraper planning, or Q-Team, was resolved. It is mandatory to include this

Table 3. Overview of the case study committees.

	Population		Metropolitan GDP/capita		Institutionalization
City or Metropolitan Region and Committee	Total 2020	Growth 2011–2020	Volume	Annual Growth 2010–2020	Founding Body Year of Foundation Number of Members
City of Vienna VHF JHDC	1.921 million	11.9%	€51,400/capita	1.15%	VHF 1995 12 members
RCBM Q-Team	416,156	7.1%	CHF 106,858/capita	0.1%	RCBM 2009 Five members

Sources: Stadt Bern (2021a, 2021b); Statistik Austria (2021); Verein Region Bern (2009); wohnfonds_wien (2021).

committee in the development of high-rise projects by municipalities and private developers.

5.1. Setting

Even though both committees engage with neighborhood developments, albeit in different contexts with regard to scale (city vs. city-region), they share common characteristics when it comes to the organizational setting in which they are embedded. The JHDC as well as Q-Team are coupled with organizations that are not the official, permission-giving planning authorities at the municipal or cantonal level. The Q-Team is linked to the spatial planning administration unit of the RCBM, while the planning authorities are the 75 municipalities of the region and the canton. In the Viennese case, the VHF is responsible for the administration of the housing subsidies, for which quality control measures such as the JHDC have been implemented, while the municipality of Vienna administrates the official planning and building procedures. This can lead to confusion on behalf of developers, who possess limited knowledge of the planning system. For a smooth operation of the committees, it is thus critical that their "mother organizations" have provided them with administrative personnel to communicate with developers, prepare project-specific documents for each committee's meetings, protocol them, ensure that deadlines are met, and coordinate development projects with the relevant planning authorities. These personnel resources are, in both cases, mentioned as essential for the efficient and successful work of the committees.

This institutional setting in the planning system implicates that both committees must comply with the regulations of the relevant planning system and/or specific regulations for the committees. For Q-Team, for example, rules regarding the governance and evaluation of projects have been implemented as part of the regional skyscraper concept of 2009. Furthermore, Q-Team has to deal with communal planning regulations from over 75 municipalities, whereas JHDC is embedded into the complex Viennese planning system. The new building laws (*Wiener Bauordnung*) of 2019 stipulate that in every housing project with more than 5,000 m^2 of floor area, more than 70% of the housing units must be affordable and/or subsidized, increasing pressure on the VHF and JHDC. Therefore, the limit of housing units for JHDC has been increased from 300 to 500 to accelerate planning processes, since conflicts between the JHDC and other committees in the Viennese planning system can arise, as one of the directors of JHDC reported: "In the worst case, a developer has to deal with five planning committees in one neighborhood." The setting of a committee needs to be well coordinated within the overall permit process and is thus closely linked to issues of temporality, as the chair of Q-Team illustrated:

> If we are included too late into the preliminary talks of projects, for example in the evaluation of the location, then our committee cannot be fully effective. In these cases, a situation can arise in which the planning procedures are more or less done, but many of the core quality criteria of the skyscraper concept have not been adequately included and we need to give critical remarks to the cantonal planning department.

If the setting of a committee is not adequately aligned with the overall planning system, considerable coordination deficits can arise, leading to postponements as well as confusion on behalf of the developers.

5.2. Scope and Scale

While the committees are formally embedded in organizations that work on the municipal and city-regional scale, the neighborhood or the building plot are the relevant spatial scales for both committees in their daily work. The scope of their work hence derives from challenges set at these spatial scales. Because of the unique heritage of skyscrapers in the RCBM and the pressures for further (re-)development of skyscrapers through urban growth, Q-Team was founded with the goal to create "positive examples of skyscraper developments in the Bern city-region and the launch of a differentiated and continuous debate about the role of skyscrapers within the region" (Verein Region Bern, 2009, p. 49, authors' own translation). To achieve these goals, Q-Team has the task and responsibility to support municipalities as well as investors and project developers during the planning phase of skyscrapers. To fulfill it, Q-Team can rely on planning instruments such as the criteria of the skyscraper concept. For the mostly small municipalities in the RCBM, this scope of Q-Team, as well as the regional scale within which is embedded, has the additional benefit that they can rely on experts who work with transparent quality criteria from different disciplines when they negotiate with investors and project developers. Thereby, the power imbalance between municipality and developers is levelled, positively affecting the local state's role in growth management.

In the Viennese example, the VHF is responsible for the acquisition of building plots for further development and allocation to public and private developers, while the need for quality control is inscribed into financing laws. However, the JHDC itself is not institutionalized through these laws but instead, through the VHF itself; it is only responsible for housing projects subsidized by the VHF through funding or provision of VHF-owned building plots. As in the case of Q-Team, JHDC work is guided and aided by quality-control criteria. JHDC uses a four-pillar model, in which architecture, economy, ecology, and social sustainability are the abstract criteria from which more detailed criteria are derived. As the expert responsible for social sustainability noted, the responsibilities and associated quality-control criteria can change over time. Back in 2009, the Viennese councilor for housing development explicitly demanded

a stronger focus on social topics in housing developments with associated quality criteria. Again, together with experiences from Q-Team, this demonstrates how interdisciplinary planning committees can strengthen the public hand's role vis-à-vis primarily growth-oriented developers. On the other hand, the spatial fixation with territorialized neighborhoods and building plots clearly delimits the committee's scope. In both cases, the committees are restricted by institutionalized fixation on singular projects, even though it would often be necessary to discuss the projects' embeddedness within the wider urban fabric.

5.3. Temporality

Questions of temporality play an important role when it comes to the facilitation of urban growth. The Q-Team meets six to seven times a year, while JHDC held a total of five jury sessions in 2020. In the case of rejection or a negative judgement, developers lose important time during which construction prices may rise. While in the case of Q-Team, developers may return to the committee at a later point with an improved project, developers that fail to secure a Viennese housing development competition have amassed costs for the drafts of the projects but received nothing to implement. As the chair of the JHDC explained, this can, in some cases, lead to more than 20 losing projects. Even winning projects must interact with other VHF quality control committees to guarantee the qualities that allowed the projects to win are secured during the overall planning process. Furthermore, these projects must still go through the formal process of acquiring building permits from the city of Vienna. As the directors of the VHF explained, rejection during the competition but also critical remarks during the further planning process can lead to resentment from the developers. However, as Q-Team was able to learn, the opposite can also be true, as some developers use the expertise of the committee to improve their projects and receive quicker approval from planning authorities in return.

Another aspect of temporality is the period committee members serve. The JHDC as well as Q-Team are institutionalized without a date of expiry, but in both cases, the members must rotate after a certain timespan. In Q-Team, the five members are elected for a period of four years by the RCBM, while JHDC members are elected for three years by the directors of the VHF and the Viennese councilor for housing development. Members are only allowed to be re-elected once, while another re-election after an absence from the committee is possible. Duration of membership is a very delicate topic in both cases, as members of the committees are frequently confronted with conflicts of interest and associated critiques from individuals and organizations outside of the committee. In Vienna, the chair of JHDC criticized how strange situations arise when members of the committee must leave the room because one of their own projects is being discussed. This is a critical component for the committees since low degrees of legitimacy lead to losses in the acceptance and stability of the committee.

5.4. Decision-Making Power

In the end, every institutional consideration arrives at the question of who decides what. Both committees examined in-depth constitute a mixture of procedural and quality-control capacities. The procedural capacities come into action because, in both cases, some form of planning regulation demands the inclusion of the committee, and their decision and recommendations lead to further actions by other organizations or individuals. While the quality-control capacities differentiate with regards to the number and discipline of different experts as well as their evaluation criteria, the procedural capacities of the two committees are subtly differentiated. Both committees' institutionalizations allow them to discuss and judge neighborhood development projects with far-reaching consequences. However, there are some restrictions: Q-Team can address every skyscraper, but not every neighborhood development project; JHDC is restricted to projects that are built with subsidies from the VHF and those with more than 500 housing units (for projects under 500 housing units, another quality-control committee exists). This connection to the setting as well as the scope and scale of the committees are mechanisms to not complicate planning procedures but install a new procedural step for topics of pre-defined political importance.

In the case of JHDC, competition winners are permitted to acquire building plots for development. However, the planning process is far from finished; many other authorities can influence the specific outcomes. The VHF has quite strict possibilities to penalize developers, even a complete reset of the planning procedure reverting to the original competition winner if projects do not adequately include the core qualities of jury decision in further planning stages. However, legitimate economic considerations are quite often a central argument with which to push through changes from the competition project, after the planning process within the quality-control mechanisms of VHF is finished. In Bern, Q-Team has to be included in all planning processes that include skyscrapers and is thus in a formally strong position to influence these processes through its recommendations. Even though these recommendations are not mandatory, their setting within the planning system strengthens these non-mandatory outcomes. If developers and municipalities, as local planning authorities, have a diverging opinion from Q-Team, they have to justify and explain this opinion to the cantonal planning department. Q-Team, therefore, exemplifies the informal power a committee without final decision-making capacity can exert over planning processes.

5.5. Comparative Discussion

Our aim with this article is to illustrate the structural components that influence the work of committees involved in the development of dense and high-rise neighborhoods and to understand how committees are embedded in the wider planning system around them. We see these results in context to Nethercote's notion, that the state, and in our cases especially the local and federal state, is one of the "key shapers of the local contours of urban expansion" (Nethercote, 2018, p. 4). The JDHC of the VHF and the Q-Team of the RCBM provide key case studies in the formulation of four structural components for the institutionalization of committees as well as the interactions between them (summarized in Table 4).

Table 4. Comparative overview of JHDC and Q-Team.

Components	JHDC VHF	Q-Team RCBM
Setting	• Viennese planning and housing tradition with strong focus on affordable housing; 56.5% of all rental apartments are owned by the city of Vienna or non-profit building organizations • Adaptions of planning and building law to further promote social housing • VHF was founded in 1984 by the city of Vienna as a non-profit organization to promote affordable housing; JHDC is one instrument of quality control for new buildings and neighborhoods • VHF provides administrative personnel for the preparation of meetings and communication with external actors	• Heritage of skyscrapers from the 1950s to the 1970s in city-region with towns and small municipalities with limited administrative resources • New Swiss spatial planning law restricts building land reserves and conserves the landscape • RCBM is a regional planning organization coordinating the planning and building activities of 75 municipalities in the Bern city-region; approval of skyscraper concept within regional development plan of 2009 • Spatial planning unit of the RCBM provides administrative personnel for the preparation of meetings and communication with external actors
Scope and Scale	• JHDC judges housing developments within the limits of the City of Vienna with more than 500 apartments, where subsidies or building plots of the VHF are used • Projects are evaluated using the four-pillar model (architecture, economy, ecology, social sustainability)	• Q-Team consults the 75 municipalities of the RCBM and private developers with regards to skyscraper developments • Projects are evaluated with regards to the principles of the regional development plan for skyscrapers
Temporality	• Twelve interdisciplinary members of the JHDC meet for around five jury sessions per year, lasting usually one to three days • Project application stage: Around 10 to 20 teams of housing developers and architects apply for subsidies or building plots of the VHF • Further quality-control cycles for winning projects with the building plot commission (*Grundstücksbeirat*)	• Five interdisciplinary members of the Q-Team meet for around six to seven jury sessions per year • Plan control stage: Project applications receive recommendations from Q-Team and can be re-called for later meetings
Decision-Making Power	• Focus on interdisciplinary quality control of neighborhood developments with final judgment based on the four-pillar model • Strong procedural element due to allocation of housing subsidies or building plots for winning projects • Final approval of building permits by the building department of the City of Vienna (MA37)	• Focus on interdisciplinary quality control of skyscraper developments as well as recommendations for efficient permit process • Informal procedural element, since recommendations are non-binding, but are considered by the cantonal planning department • Final approval of building permits by one of the 75 municipalities

Committees in general, and the two cases in particular, can be understood as a public-private nexus, in which policy goals are negotiated and operationalized before final political and administrative decisions are made. In this context, it is important to note that both of our case examples are not directly attached to formal planning authorities, but to organizations that themselves exist outside of or in between the formal and traditional levels and bodies of government and administration, with specific mandates in securing the public interests of affordable housing, design quality, and landscape protection in the production of dense and high-rise neighborhoods. As the case of Vienna—having recently regained first place in *The Economist*'s ranking of the world's most livable city (Economist Intelligence Unit, 2022)—illustrates, such "soft" goals can also indirectly contribute to the promotion of urban growth and competitiveness.

Our understanding of both cases reveals a considerable influence on the planning politics of the cities of Bern and Vienna through formal as well as informal factors. Both committees gain particular power through the weight their recommendations are granted in formal planning procedures, albeit in different ways. In the Viennese case, the JHDC does not approve building permits, and the competition-winning projects can still be altered until the final permits are issued. The JHDC, however, makes an important pre-selection of large neighborhood development projects, with more than 500 apartments coming into consideration for housing subsidies and building plots owned by the VHF. Since the VHF is a powerful actor in the Viennese system of housing provision, JHDC clearly pre-defines the appearance of new dense and high-rise neighborhoods in the city of Vienna, thereby shaping housing policy and living conditions for decades to come. In contrast, the power of Q-Team in the Bern city-region is more nuanced. Even though its recommendations are not officially binding for the municipalities, Q-Team can strengthen the negotiating position for small municipalities vis-à-vis private developers in particular. This occurs, for example, because non-recognition of the Q-Team's recommendations must be explained to the cantonal planning department.

Both cases demonstrate that the institutionalization of committees plays a crucial role in their ability to fully exert power over the balancing act in vertical urbanization; namely seizing the opportunities of urban growth, while simultaneously securing public interests such as affordable housing and public green spaces. This article thus underscores the literature that shows how a rising number of committees and fragmented decision-making structures can lead to an increasingly complex jurisdictional and procedural setting, which can, in effect, prolong the development of dense and high-rise neighborhood developments. There is a constant danger that neighborhood development processes become too complex, individual projects become stuck, and important time in the provision of housing and services is lost. Intersections and confusions with other committees or planning departments are quite common, as we were able to learn in Vienna. To minimize such effects, the Q-Team includes not only recommendations regarding the project itself in its feedback, but also recommendations with regards to an efficient planning and development process. As the chair of Q-Team noted, Q-Team identifies its role in these processes as a "facilitator," and these recommendations are "highly regarded by the developers." While committees may not be large in the number of members, their institutional embeddedness can significantly influence, improve, distract, or prolong planning procedures of complex processes such as dense and high-rise developments.

6. Conclusion and Outlook

Even though the literature on committees, as well as our own empirical research, note a rise in their number and diversification, planning committees remain a neglected field of study, from political science to planning (Weihe et al., 2008, p. 339). As such, our research has particularly focused on committees as an instrument of the (local) state in the shaping of vertical urbanization. While we do not argue that our cases stand in contrast to Nethercote's (2019) study of Melbourne, or Rosen and Charney's (2018) study of Jerusalem, they illustrate that specific planning instruments such as committees need to be considered within the state's role in the production of vertical urbanization. Both committees under investigation are embedded in local and federal states that have taken legislative and financial measures to promote public interests, and, at the same time, try to seize the opportunities of density and verticality in the global competition of city-regions. The committees do not question density and verticality as a means to promote and secure urban growth, but rather mediate the production of density and verticality as a form of public-private nexus.

This article proposed examining the institutional embeddedness of planning committees using the structural components of Setting, Scope and Scale, Temporality, and Decision-Making Power to better understand the local states' involvement in the production of dense and high-rise neighborhoods, as one important manifestation of vertical urbanization. Our research suggests that the rise of committees leads to a paradoxical situation in an era of entrepreneurial urban development. On the one hand, committees such as the two case study examples in Bern and Vienna are certainly able to increase the public administration's negotiating power vis-à-vis private developers. On the other hand, committees and their institutional embeddedness also contribute to increasingly complex planning and building permit processes, since a new level of decision-influencing is introduced into such processes.

Complex planning and permitting processes favor established property development agencies and architectural offices, as we were able to learn in both cases.

The analysis of the two cases along the identified four structural components illustrates that project applicants such as planners and developers need to have specific knowledge about the institutional embeddedness of the committees to "smoothly" navigate the processes of achieving a building permit. Our analysis is therefore indicative of the importance of what Nethercote (2018, p. 20) calls intermediaries that "exist between capital markets and urban production." Established city-regional hegemonies can hence be reproduced; the fact that most of the members involved in planning committees run private offices themselves can be detrimental to the credibility of the committees. Such structures certainly call for further academic investigation.

While we were able to derive important insights through which structural components of committees are institutionalized and how these influence neighborhood development processes, further research is necessary also on other aspects of committees. First, with regards to the Setting, for example, the intentions that legitimated the committees' foundation and the relation of how they work in practice and interact with other bodies in the planning system needs further examination. Second, the Scope and Scale needs to be more clearly defined, as well as how this definition can be implemented in the daily practice of committees, especially when they have to deal with a plethora of small municipalities with their own institutional logics. Third, how long should a committee exist, and how often should it meet? Temporality includes critical and highly political facets such as increasing conflicts of interest the longer the committee meets with the same personnel. Fourth, even if committees have no formal Decision-Making Power, they can influence political decision-making and, as Williams (2014, p. 445) argued, help to push through resisted development projects. These are just a few examples in which a more detailed analysis of the role of committees in the production of urban density and verticality would find fertile ground.

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Conflict of Interests

The authors declare no conflict of interests.

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Article

Opportunities and Challenges of Municipal Planning in Shaping Vertical Neighbourhoods in Greater London

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Abstract
Production of housing in London is driven by three factors: a housing crisis that requires the construction of more than 1.6 million homes by 2025, a model of social housing production mainly delivered through private developers' contributions, and a metropolitan governance structure through which housing targets are allocated to municipalities with highly unequal pressures, being inner London boroughs the ones with the highest targets to meet. In the context of a non-prescriptive and liberalised planning system, this threefold scenario has resulted in the construction of unprecedented residential landscapes, dominated by high-density and high-rise buildings. Tower Hamlets Council is at the forefront of this challenge both in the UK and Europe and is trying to develop planning tools to shape them. This article discusses three innovative supplementary planning documents (SPDs) produced by the policy team that have had unequal success in shaping different aspects of this form of development: the South Quay Masterplan SPD, the High Density Living SPD, and the soon-to-be-adopted Tall Building SPD. A comparative analysis of these planning documents and the perception of urban planners working at different stages of the planning process on the effectiveness and limitations of these SPDs in shaping vertical neighbourhoods shed light on the key factors influencing the role municipal planning can have in delivering a built environment that supports residents' quality of life. By doing so, this case study illustrates the limitations of municipal planning and planners in local government, pointing to more structural and strategic issues of metropolitan governance.

Keywords
local planning authorities; London; metropolitan governance; tall buildings; urban planners

Issue
This article is part of the issue "Vertical Cities: The Development of High-Rise Neighbourhoods" edited by Brian Webb (Cardiff University) and James T. White (University of Glasgow).

1. Introduction

The housing crisis in London is characterised by a lack of enough affordable housing which forces Londoners to live in expensive, overcrowded, and poor-quality conditions (Greater London Authority [GLA], 2018). This crisis is primarily caused by a continuous undersupply of housing (Gallent, 2016; Schmickler & Park, 2014), the commodification and financialisation of housing (Wijburg, 2021), as well as a lack of rent control policy in the city. According to a recent BBC News (2019) report, this has only been made more acute during the Covid-19 pandemic. To solve this crisis, the current Mayor of London has established the London Housing Strategy (GLA, 2018). Although the strategy recognises the importance of key policies such as private rental control, the diversification of the construction industry, and leasehold improvement and reform, the main emphasis is on increasing the supply and construction of new homes. In fact, this report estimates that 66,000 new homes need to be built every year for the next 20 years across the city. But where and in what form will this growth be accommodated?

The history of urbanisation in London until the 20th century is of predominantly low-rise development, with some examples of robust medium-height blocks delivered by the London County Council (Morris, 1994) during the early decades of the century. However, in the post-war era, high-rise initiatives of social housing started to emerge. These have generally been described as unsuccessful, and numerous developments of this

type have recently been demolished and redeveloped (Baxter & Lees, 2009). This narrative suffered a shift in the early 2000s, when the first Mayor of London, Ken Livingstone, accessed the office and openly showed his support for this form of development (Charney, 2007). Although different institutions such as Historic England and the Commission for Architecture and the Built Environment opposed this approach, tall buildings started to emerge, primarily in the centre of London and almost entirely as offices (New London Architecture, 2018). Since the creation of the GLA in 2000, there have been three distinct stages with different approaches to the role of high-rise buildings in the city and its planning: the first under Ken Livingstone (Labour) between 2000 and 2008, a second phase under Boris Johnson (Conservative) between 2008 and 2016, and the current one under Sadiq Kahn (Labour) since 2016. The period under Livingstone's mandate has been widely studied (Appert & Montes, 2015; Glauser, 2019), uncovering his key motivations to use skyscrapers and *starchitects* to situate London as a global metropolis that could attract investment, as well as the key governance mechanisms through which multiple actors were brought together to shift the discourse around the need to transform and modernise the city's skyline (White & Serin, 2021, p. 27). This article explores the next two stages between 2008 and 2020, as these remain understudied.

As a general overview, under Boris Johnson and Sadiq Kahn, the construction of high-rise buildings continued and accelerated (New London Architecture, 2021). As a result, one of the key post-2008 characteristics is the proliferation of numerous high-rise clusters of buildings, as opposed to single flag-ship high-rise developments. This is the irruption of new urban environments where tall buildings represent the dominant type, and where the relationship of buildings and the public realm introduces a new set of challenges regarding their appropriate scale, intensity of use, and questions of ownership and sustainable management. Another important characteristic of these later stages is the expansion of this form of development to hosting diverse uses, including housing and mixed-use buildings. I will refer to these new forms of residential neighbourhoods as vertical neighbourhoods. The proliferation of this form of growth meant that a much broader set of architects, builders, and developers would join the construction activity of these buildings. In consequence, as discussed by English Heritage and Commission for Architecture and the Built Environment's (2007) report, the quality of buildings and the public realm have been compromised, with important quantitative and qualitative deficits. How policy and actors are trying to address these deficits in high-rise and high-density neighbourhoods by proactively shaping these new environments is this article's object of enquiry.

In this article, I draw on the findings of mixed-method research investigating the production, regulation, and shaping of high-density and high-rise neighbourhoods in London. The aim is to provide an insight into the tools through which different government tiers—local planning authorities (LPAs thereafter) in particular—in the discretionary and market-led UK planning system can shape vertical neighbourhoods in its broader sense, moving beyond the *problematique* of single high-rise buildings. While recent publications have produced a comprehensive review of some of these tools (Short, 2012; White & Serin, 2021), including management frameworks and design guidelines, these instruments are generally presented as non-problematic and/or subject to opposition, resistance and/or transformation. In this article, I reflect on the processes of production of these policy tools, as well as comparatively analyse their current and potential efficiency to proactively shape these emerging residential environments through the planning process.

In order to do so, I bring two fields of literature into a single interpretative framework. The first is on tall buildings and explains the construction of these residential landscapes as a result of macro-level and structural economic forces, as well as a result of the use of different design and planning tools to shape their form. This body of literature has two important gaps. First, it has merely focused on the place-shaping and planning analysis of wider strategic heritage impacts of single high-rise buildings, as opposed to reflecting the multiple challenges and deficits of high-rise building clusters. Second, this body of literature has focused on the structural economic pressures driving this form of development and has been less concerned with the analysis of the specific decision-making processes in a multi-level government setting. I, therefore, adopt a multi-scalar and multi-level governance framework to understand how new high-rise neighbourhoods are being constructed and contested through the different tiers of government, and ultimately to better understand why such important quality deficits exist in these new residential landscapes. In short, in this article, I investigate the ability of LPAs and local planning tools to shape different aspects of this growth.

2. A Multi-Scalar and Multi-Level Governance Critical Exploration of Density and Height

The planning of tall buildings and high-density developments in Europe has recently entered the academic agenda more vitally, as cities that historically restricted and refused high-rise buildings have lately embarked on permitting a significant number of developments of this type (Drozdz et al., 2017; Pipe, 2018). This scholarship exploring high density and height can be divided into two distinct bodies. On the one hand, a critical enquiry into the underlying and structural factors driving this form of development and growth, such as globalisation (Atkinson, 2019; Graham, 2015) and urban neoliberalism (Nethercote, 2018; Rosen & Walks, 2013), and, on the other hand, an emerging body of work, investigating from a place-shaping perspective some of the key

challenges associated with the design of high-rise buildings (Al-Kodmany, 2017). On the former, authors have pointed to some of the main macro-level conditions shaping this form of growth such as market-orientated planning policymaking, profit-driven development, and the privatisation and financialisation of housing provision (Flynn, 2016; Robinson & Attuyer, 2020). On the latter, we can find urban design studies that investigate questions regarding the place-shaping of tall buildings, particularly their impact on the heritage of cities (Short, 2012), technical aspects to achieve more environmentally sustainable buildings (Al-Kodmany, 2018; Szolomicki & Golasz-Szolomicka, 2019), as well as the various impacts these developments have on residents' quality of life and the life of cities more generally (Blanc & White, 2020; Du et al., 2017; Fisher & McPhail, 2014).

While the analysis of the structural forces resulting in the vertical development of residential landscapes across the world has been widely studied mainly in terms of urban intensification (Charmes & Keil, 2015; Keil, 2020; Rosen, 2017), the analysis of how these have materialised in the built environment in different physical forms and spatial configurations across different contexts is more limited. As pointed out by White and Serin (2021), how urban intensification forces translate into specific policies is a context-dependent issue influenced by the regulatory planning system and the political context within which regulatory bodies develop those regulations. Recent reviews have brought to the fore a synthesis of tools and policy approaches across key cities in Europe and North America (Short, 2012; White & Serin, 2021), such as characterisation studies, environmental impact assessments, transferable development rights, or computational tools (GIS, VuCity, etc.), with two important shortcomings. First, literature has generally uncritically provided a synthesis of policies and tools to shape vertical neighbourhoods with a lack of analysis of their efficiency in meeting a set of outcomes. Second, this literature has narrowly focused on issues linked to strategic heritage protection (Cohen, 1999; Tavernor, 2007) and townscape conservation (Phelps et al., 2002), overlooking how other aspects of high-rise design are planned (or not), such as the quality of internal units (Allouf et al., 2020) or the relationship of high-rise buildings with the public realm (Al-Kodmany, 2017). This article provides an analytical framework to investigate the efficiency of different planning tools in meeting certain outcomes, at different scales of high-rise vertical neighbourhoods, and in a particular political and planning context.

Furthermore, in the work above, one can recognise the macro-level structures driving urban growth and regeneration, as well as the more micro-level aspects shaping vertical neighbourhoods. This synthesis highlights a relatively overlooked space in-between, capable of explaining how and by whom current tools are being developed and operationalised, and how these macro-level settings condition, limit, or enhance their effective use for shaping good vertical neighbourhoods. This is particularly important as scholarship has tended to reduce the analysis of vertical neighbourhoods' production to a technical matter of height management or façade design. In fact, this tendency for the analysis of height production to focus on technocratic issues has meant that critical questions regarding the contextual political struggles taking place in shaping different aspects of vertical neighbourhoods have been downplayed, particularly concerning the multiple government tiers involved in producing policies and determining planning outcomes. To address this, we need to, while reflecting on the scope and capacity of local planning and planners in shaping those places, locate these within the broader decision-making process and governance framework. This means moving beyond the macro and micro levels to develop a situated and more nuanced explanation of why vertical neighbourhoods materialise the way they do, and the possibilities and challenges to improve this.

3. Uncovering the Production of High-Rise Neighbourhoods in Tower Hamlets

To investigate the production of high-rise neighbourhoods through a situated, multi-scalar, and multi-level governance approach, London emerges as a fascinating case study. As reflected by Gordon and Travers (2010), the metropolitan scale in which LPAs operate in London is paradigmatically complex. However, scholarship has either ignored or misrepresented the different roles, relationships, and frequent tensions between the local and metropolitan levels. These government tiers have been, generally, either assimilated (Appert, 2012) or their changing relationships—as well as attitudes to height—poorly investigated. This is particularly relevant in the context of the UK planning system, given its discretionary nature, which creates a space for negotiation for vertical developments. This article seeks to contribute to this literature by investigating the production of high-rise buildings and vertical neighbourhoods in Tower Hamlets (TH thereafter), to better understand how some decision-making processes within multi-level governance have influenced their final shape, with a particular focus on some of the key differences between Boris Johnson and Sadiq Khans' mandates.

3.1. Tower Hamlets at the Forefront of the Challenge

TH is London's densest borough, as well as the municipality with the highest number of tall buildings (New London Architecture, 2021). Despite this, TH is also the borough with the second-highest housing target, only behind Newham. This means 3,100 homes need to be built in the borough every year until 2025. Several factors can explain to a certain extent some of this data. First, TH is an inner London borough which covers much of the traditional "East End" (Figure 1). During the 18th and 19th centuries, this area experienced massive

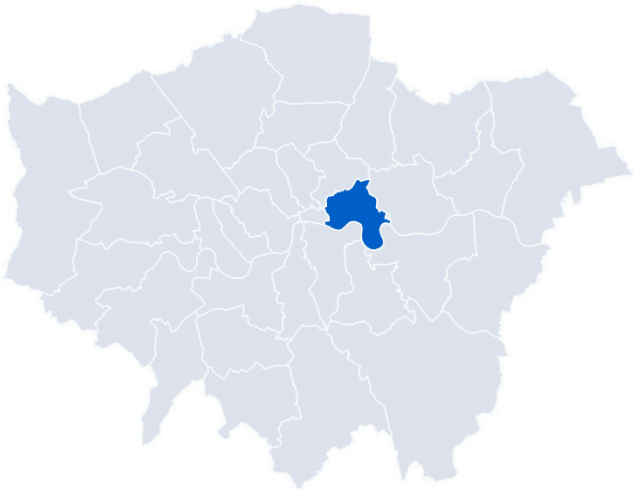


Figure 1. TH Council in Greater London.

demographic growth as low-paid workers and immigrants moved there to work in the industries and docks, resulting in extreme overcrowding, the concentration of poverty, and high levels of disease and criminality. The area was heavily bombarded in the Second World War, given its industrial character, the presence of the docks along the Thames, and the important railway lines that connected London with the east. Numerous sites that were bombarded were redeveloped to house displaced residents (Palmer, 2004). Another contributing factor to the current built form and path of development is the numerous brownfield sites that have been, are, or will be very densely redeveloped to meet the borough's extremely high housing target. Finally, the north of the Isle of Dogs was redeveloped in the 1980s by the Canary Wharf group as the second financial centre in London, which radically changed the skyline of the borough, with the presence of some of the tallest buildings in the city (Figure 2).

Until the late 1990s, the only high-rise buildings in TH were commercial buildings in Canary Wharf—with some brutalist residential buildings scattered through the borough—and most residential buildings were constructed as medium-height and medium-density.

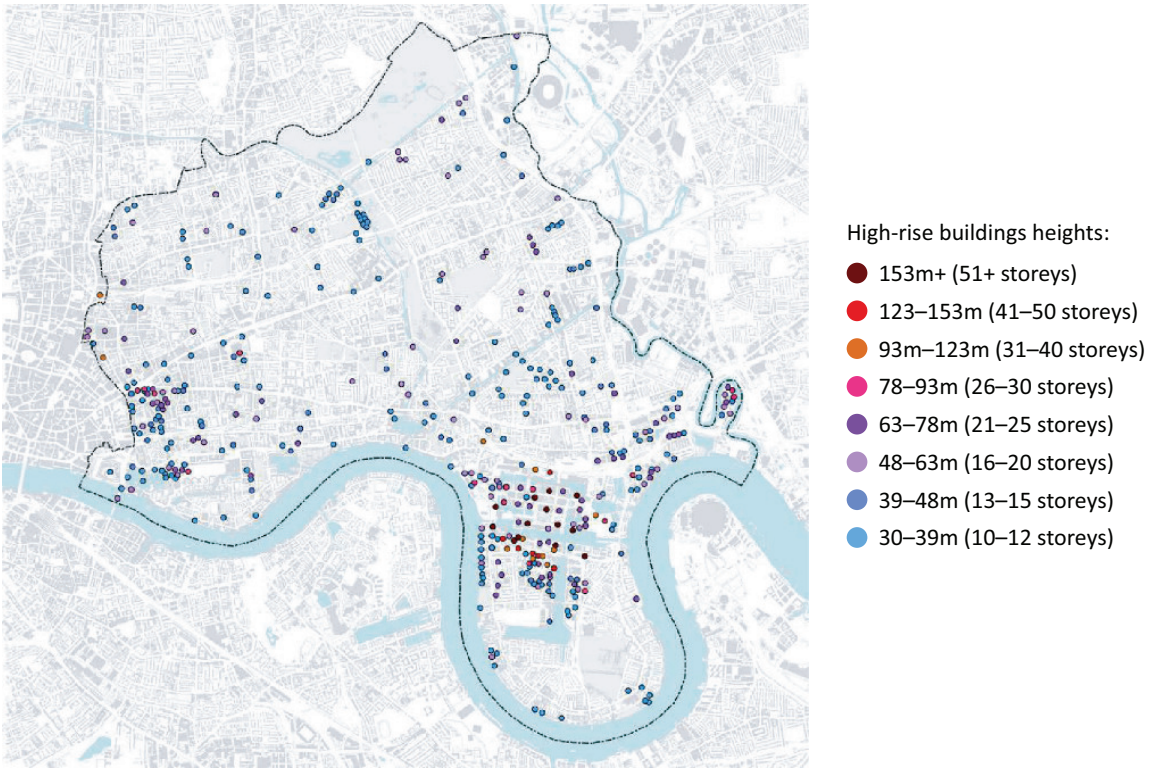


Figure 2. High-rise buildings in TH Council. Source: TH Council (2021, p. 17).

However, since the early 2000s, the form of development starts to be increasingly denser and taller. Figure 3 shows the height and density of planning application proposals submitted to the Council within the 2000–2016 period. Some of these exceed the maximum density thresholds set by the GLA in the 2016 London Plan by more than six times. In a cross-borough comparison (Figure 4), TH is at the forefront of the creation of vertical neighbourhoods, with other boroughs closely following this path. We can therefore state that vertical neighbourhoods are becoming the main form of development across London.

By being at the forefront of this form of growth (Figure 5), TH has faced the challenges of how to plan and shape high-rise and high-density developments for a long time, providing a good case study to reflect on their experience. Table 1 synthesises the numerous policies adopted at both metropolitan and local levels since the 1990s. From a metropolitan level, we can distinguish two stages. The first stage included London Plans 2011, 2013, and 2016, all adopted by Boris Johnson's administration; and the second stage with the draft publication of the London Plan in 2017 which was finally adopted in 2021 by Sadiq Khan. In the first one, the approach focused on mitigating negative impacts regarding heritage and environmental considerations and positively contributing to legibility from a strategic and skyline perspective. The approach under Sadiq Khan changes significantly, as it not only tightens the definition of what a tall building is but also requires LPAs to define areas where tall buildings are appropriate and introduce considerations of functionality at the building scale. In response to this metropolitan policy context, TH has adopted three development frameworks or local plans. While the 2010 Core Strategy and 2013 Managing Development Document capture the London Plan's strategic approach to the management of height—also including references to the provision of communal and open spaces at the intermediate scale—the 2020 Local Plan makes a radical move to more proactively manage high-rise buildings by setting tall building zones as well as developing a Tall Building Evidence Study (Tower Hamlets Council, 2018) which sets the path to the management of tall buildings in a more holistic and proactive way. Under these two local plans, a series of supplementary planning documents (SPDs) was adopted that try to shape high-rise buildings further. SPDs are non-statutory planning documents aiming to provide additional information to assist with the interpretation and implementation of policies set out within the local plan. While the SPDs adopted until 2016 take a place-based approach, merely indicating strategic heights accepted in an area, SPDs developed after 2016 take a more innovative approach trying to shape other scales of vertical neighbourhoods such as the intermediate and building scale. I will discuss three of them: South Quay Masterplan (SQM) SPD, adopted in 2016 and currently superseded; the High Density Living (HDL) SPD, adopted in 2021; and the Tall Buildings SPD, currently in the process of adoption. This article seeks to analyse the perception of planners on the effectiveness of these tools to shape vertical neighbourhoods.

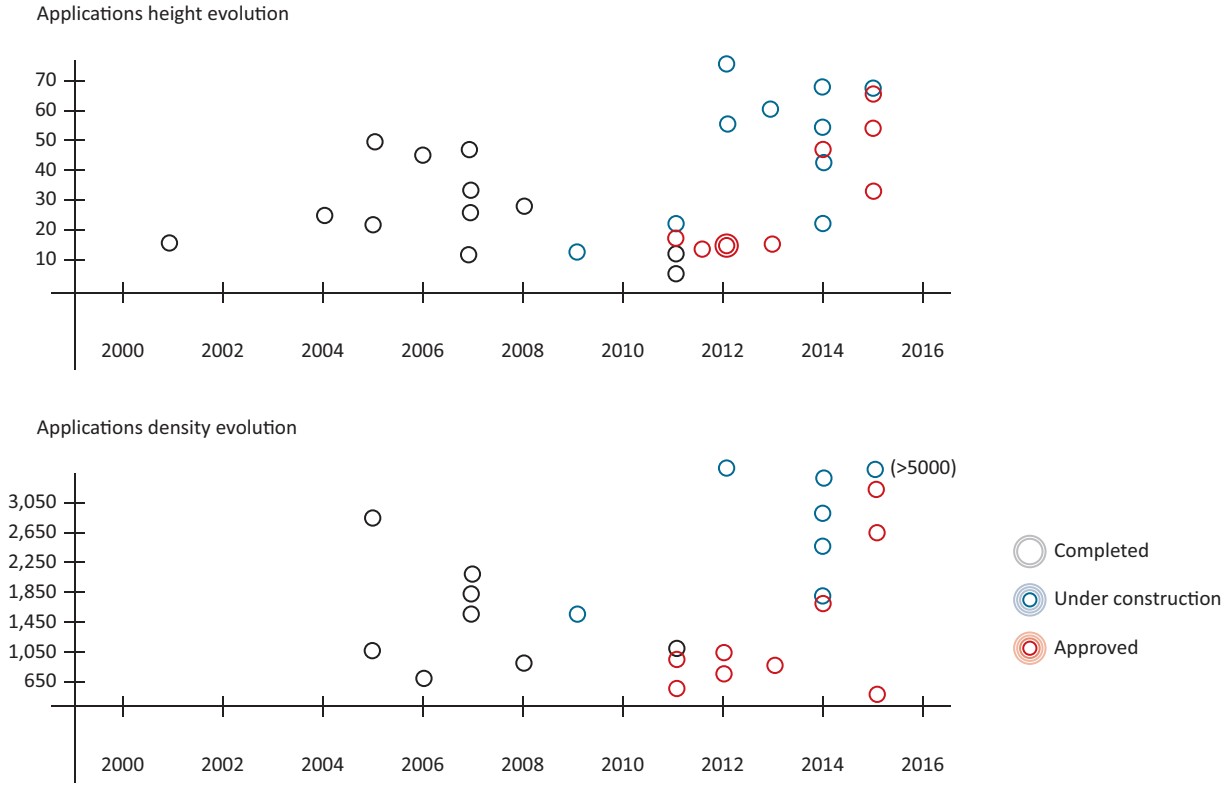


Figure 3. Height (meters) and density (habitable rooms per hectare) of planning applications submitted to TH Council.

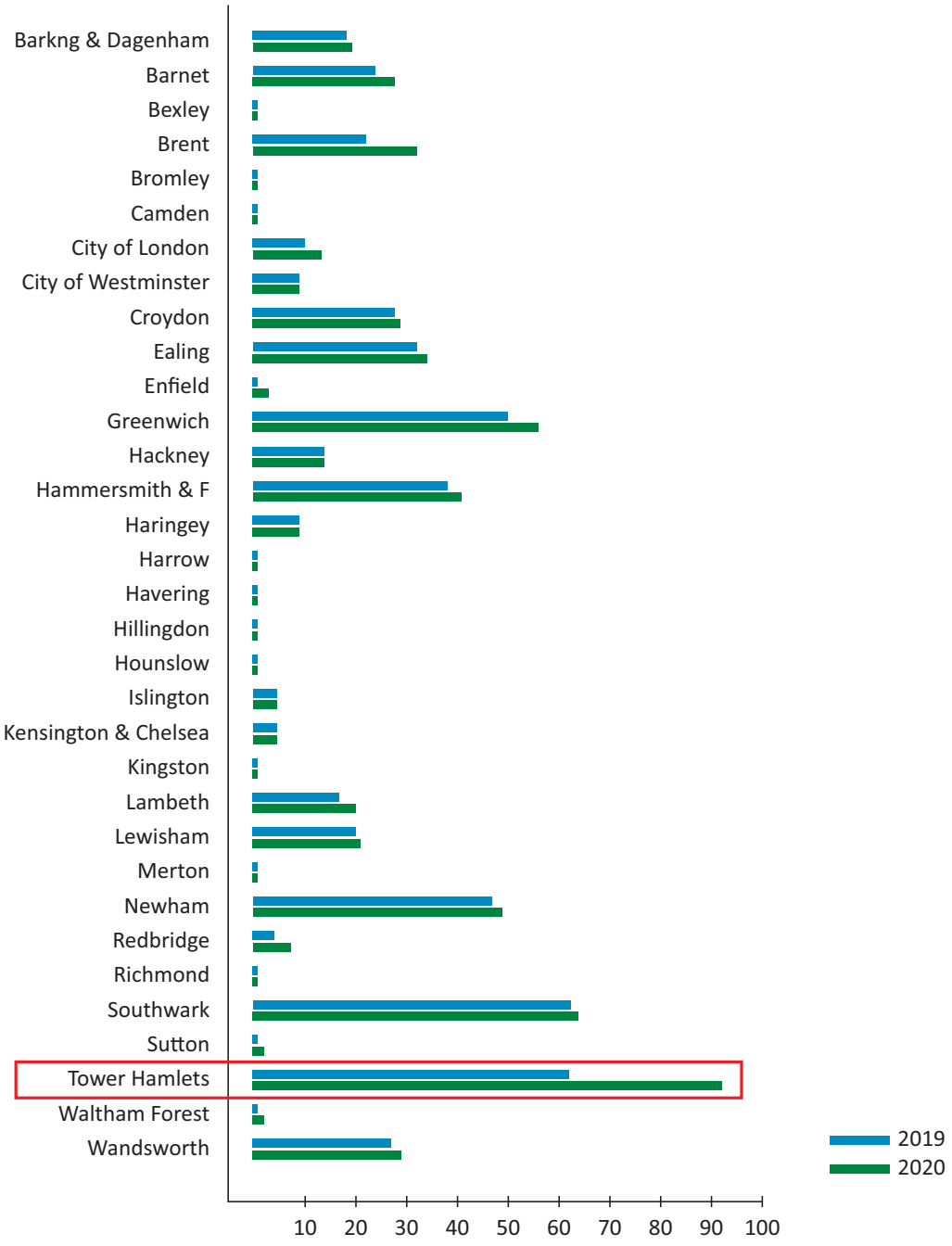


Figure 4. Pipeline of tall buildings across LPAs. Source: Author's work based on New London Architecture's (2022) report.

Figure 5. Vertical neighbourhood in the Isle of Dogs. Source: Courtesy of Jim Stephenson.

3.2. A Mixed-Method Approach

To address the above question, this article uses a comparative and mixed-method approach: a qualitative analysis of interviews with urban planners given their active role in the planning process (Lawton, 2013), as well as a quantitative analysis of applications' decisions. The latter seeks to corroborate some of the claims made by urban planners and establish the scale and impact certain decision-making mechanisms have had on the development of vertical neighbourhoods.

The first analytical part draws upon 12 open-ended interviews carried out in November 2021 with urban planners working at different stages of the planning process: from the initial stages of plan making—including the preparation of evidence and the development of policies—to later stages—including the implementation of policies through the negotiation of applications as well as case determinations and appeal processes. Furthermore, the framework of participants includes interviewees working at the municipal and metropolitan levels, as well as in the public and private sectors (as applicants or consultants for the public sector). The interviews aimed to assess to what extent urban planners think municipal planning in TH is suited and able to shape good quality vertical neighbourhoods from a social, environmental, and place-shaping perspective. The main questions discussed in the interviews were:

1. To what extent do you think you have enough policies and tools to shape vertical buildings and/or neighbourhoods?
2. If not, what is missing?
3. Are there any other factors that compromise your ability to shape this form of growth?

The second part of the analysis explores strategic planning application resolutions between 2008 and 2020. I gathered this data through secondary data sources, publicly available on the GLA's website as well as by TH's strategic planning reports. This analysis looks at what have been the predominant paths to determination and their results.

4. Discussion

The majority of planners in TH LPA believe the policy setting in the Council is comprehensive and layered in a way that, through negotiations with applicants, vertical developments can be shaped to achieve positive outcomes from a social, environmental, and place-shaping perspective. As per the multi-scalar analytical framework set out before, planners in the LPA reflected on the three key scales through which vertical neighbourhoods can be shaped (Figure 6). These are (a) strategic, identifying areas where tall buildings can be built as well as the skyline or the three-dimensional relationship of their silhouette (e.g., stepping down principle);

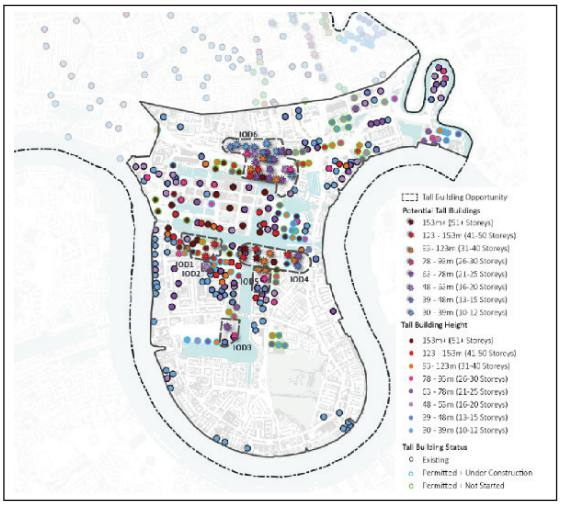
Table 1. Regulation of height through the TH Local Policy Planning Framework.

Year	GLA (London Plan)	Local Policy Document (CORE and Supplementary)	Content (Approach to height)	Scale
1986		TOWER HAMLETS BOROUGH PLAN	—	—
1998		UNITARY DEVELOPMENT PLAN	—	—
2010		CORE STRATEGY	Heritage focus	Strategic
		• Development Plan Document	Canary Wharf and Aldgate (Town Centers) as areas appropriate for tall office buildings	Strategic
2011	*			
2012		• Supplementary Planning Document on Planning Obligations	NA	NA
2013	*	MANAGING DEVELOPMENT DOCUMENT	Canary Wharf and Aldgate (Town Centers) as areas appropriate for tall office buildings	Strategic
		• Whitechapel Masterplan Vision	Refers to tall buildings as landmarks and their location is identified at three key street junctions	Strategic (and intermediate)
2012		• Brombley by Bow Masterplan	Zoning of height and refers back to the MDD and tall buildings policy	Strategic
2015	*	• Ailsa st Development Framework	No reference to tall buildings	NA
2016		• Fish Island Area Action Plan	Tall buildings are not considered appropriate. Reference to excepcional circumstances.	NA
2016		• South Quay Masterplan SPD	The document provides an urban structure framework of perimeter blocks with towers stepping away from the edge sit.	Intermediate (and building)
2017	*			
2020		LOCAL PLAN 2031	5 tall Buildings Zones are identified. General guidance is provided on intermediate and building scale.	Strategic
		• High Density Living SPD	Best Practice Guidance for the design of high density buildings. Considerations on the operation of tall buildings.	Building
2021	*	• Waste Strategy SPD	Guidance on waste strategies for tall buildings	Building
		• South Poplar Masterplan SPD	Indication of height through zoning. Design preference for perimeter blocks and tall buildings on top. Principie of street network indicated	Intermediate (and building)

Notes: Small grey asterisk: Draft London Plan; Small black asterisk: Small alterations/Consolidated London Plan; Big black asterisk: Adopted London Plan.

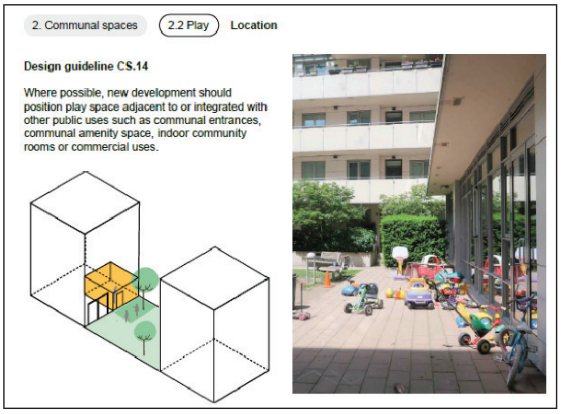
(b) intermediate, setting the urban structure of streets, open spaces, and infrastructures in which tall buildings sit; and (c) individual, defining the design characteristics and parameters of individual buildings. According to planners in TH, this stratification of different scales of policy is important as it provides more nuanced granularity to the different spaces to which the design of this form of growth should be attentive, as well as provides a structure to guide planning discussions with applicants. As a TH planner reflects on their experience in shaping high-rise neighbourhoods:

> The planning of vertical cities requires understanding the form individual buildings take, as well as the relationships between them. I mean it is not only about each building but the whole: streets, open spaces, etc. In the borough, we are trying to shape all of them but there are certain aspects that have proven to be more



Strategic scale
Tall Building SPD
(Tower Hamlets Council, 2021, p. 127)

Intermediate scale
South Quay Masterplan SPD
(Tower Hamlets Council, 2021, p. 15)



Building scale
High Density Living SPD
(Tower Hamlets Council, 2020, p. 117)

Figure 6. Planning tall buildings and tall neighbourhoods at three scales. Sources: TH Council (2016, p. 15, 2020, p. 116, 2021, p. 127).

> challenging than others. I would say that while the strategic and individual building scale is quite successful, the intermediate is not as good. If you walk along Marsh Wall, I am not sure you can say it is a successful story of city-making. (Interview 6)

In fact, as the quote and the overall analysis of interviews indicate, the initial broader affirmation of TH having the appropriate tools to shape vertical neighbourhoods is more nuanced. A discussion is provided next (Section 4.1) on the efficiency of regulations and policies to shape these three scales, and (Section 4.2) on the influence of the decision-making processes.

4.1. The Policymaking to Shape Vertical Neighbourhoods at Three Scales

4.1.1. Strategic Scale: An Evolving Tool

All interviewees pointed to how the hierarchical nature of planning policies in the UK system determines the scope LPAs have in shaping vertical developments and neighbourhoods. The higher-tier the policy, the more weight it has in the determination of cases. An analysis of national and metropolitan policy documents shows that until the adoption of the New London Plan in 2021, policies primarily focused on the strategic scale. The policy

framework did so through protected views (the earliest being the Richmond Hill, passed as an Act of Parliament in 1902), the London Views Management Framework (LVMF) Supplementary Planning Guidance (GLA, 2021), and through a series of high-level policies in subsequent London plans—the last one with this spirit being the "location and design of tall and large buildings" (GLA, 2016, p. 291). While protected vistas was a historical and somehow limited tool, the LVMF was produced to provide more certainty to developers on appropriate heights as well as to give more independence to the metropolitan government from the Secretary of State, to ultimately reduce the number of public enquiries (Appert & Montes, 2015; Charney, 2007; McNeill, 2002; Tavernor & Gassner, 2010). However, according to interviews, protected views as a place-shaping tool are very much limited to mitigating negative impacts on heritage aspects as opposed to defining heights strategically and proactively in an area. Although the 2016 London Plan provided further guidance—linking tall buildings to areas with high levels of growth and transport accessibility—interviewees found these still limited in giving them the scope to shape where tall buildings should go:

> Those tools [views management frameworks] were ok when there were not as many tall buildings. When assessing one by one made sense, but when looking at a group of tall buildings in an area it is not enough. It is only about long-distance perception, and we were lacking more comprehensive planning of height. The case of Cubbit Property Holding Ltd in 2018 [Appeal Ref. APP/E5900/W/17/3190531, Inquiry 10/10/18] shows how weak the LVMF is for us. While we refused the application because it was too tall, the Secretary thought it was appropriate and positive for the skyline….With the adoption of the Tall Building SPD, we will regain control over the negotiation of heights and strategic decisions. (Interview 8)

As the interviewee indicates, policies in place until very recently were subjective and not suited to the emergence of high-rise building clusters, hence calling for a more place-based and local approach to height. Indeed, the new London Plan (2021) provides two key additions that are changing policy weighting and increasing the power of LPA on the strategic scale. The first is the recognition of the importance of local views and the requirement for LPA to include these in local plans. The second is the delimitation of tall building areas where only tall buildings are permitted and where a more prescriptive and detailed definition of maximum heights within these areas is incorporated. This is a significant change since the first London Plan, which prohibited the imposition of "unsubstantiated borough-wide height restrictions" (GLA, 2004, Policy 4B.8). A bit before this new metropolitan policy approach, TH adopted an innovative policy in its 2031 Local Plan, identifying tall building zones, and further stating the need to prepare a Tall Buildings SPD to establish the potential for tall buildings and guide their height within the five tall building zones.

4.1.2. Building Scale: An Aestheticised Matter

On the contrary to the strategic scale, the planning and design of tall buildings at the intermediate and single-building scales have for a long time received very limited attention at the national and metropolitan levels. Although London plans, since the first 2004 version, have referred to the importance of good and exceptional design in the case of large and tall buildings—Policy 4B.10 (GLA, 2004)—this has been kept as a rather "vague, subjective, and aestheticised matter" (Interview 2). To address these gaps, and more generally the deficient and poor quality of the built environment in London and across Britain (Commission for Architecture and the Built Environment, 2004), both national and metropolitan government tiers have launched two programmes with rather symbolic slogans: "Building beautiful" (Building Better, Building Beautiful Commission, 2020) and "good growth by design" (GLA, 2021). Despite this renewed attention to design, most interviewees at TH report their limitations regarding the particular urban form of high-rise developments:

> Design has entered the GLA's agenda, and also the national planning agenda. This is very welcome but look at the guidance documents they have produced. If you look at the Building Beautiful document, it is all low-scale and medium-scale examples. They do not acknowledge certain areas of the country are facing a very different problem. How do you apply those design principles in an area like the Isle of Dogs, or any other opportunity area? From a national level, they are clearly ignoring this form of city. (Interview 11)

Although, as argued by the LPA's officer, the national report lacks any reference to that form of growth, the new London Plan introduces two policies with a more targeted and functional approach to high-rise buildings beyond aesthetic considerations (however limited to the scale of the building). This policy points to some of the main challenges tall buildings pose such as maintenance, management, servicing, and general access to high-rise buildings. However, as reported by TH planners, the policy is quite vague and lacks not only detail but also a clear definition of what good design means in the context of high-rise development. As a response to this deficit in national and metropolitan policy, the TH policy team developed the HDL SPD to provide further guidance on the good design of individual high-rise buildings. This SPD was developed in-house (Cerrada Morato & Mumford, 2021), focuses on the small scale, the building, and expands the definition of "good design to a solution that supports residents' quality of life" (TH Council, 2020). This new policy document has, according to the LPA's officers, been instrumental to shape and improve

the quality of high-rise buildings:

> To address the gaps, or do not call them gaps, but further characterise and define what good design is in this form of development, the Council produced the HDL SPD. It is an innovative piece of work, supported by strong evidence and which points to key issues at the home level, communal spaces, circulation, etc. It is very context-specific and incredibly useful in not only determining cases but also in appeals. At the Bellerive House [APP/E5900/W/21/3283117] we used it a lot and the inspector agreed with us….It [HDL SPD] has received awards and everywhere we go, at every council we present it to, they say how important it would be to adopt it at a metropolitan level. But although the GLA planning team knows about it, they have not engaged in meaningful conversations. (Interview 2)

As argued by the interviewee, this SPD targeting the building scale is working for TH officers, not only in the determination of cases but also when decisions are challenged on design grounds. This attention to design at the local level is, according to Carmona and Giordano (2022), further supported at the national level. However, as per the quote above, the HDL SPD case also shows that local policy production does not have much influence on a metropolitan policy level, suggesting local planners in a hierarchical planning system are in a disempowered position to influence policy and ultimately the form these developments take.

On a more general level, the analysis of interviews on the efficiency of the HDL SPD, and SPDs in general as tools to shape high-rise neighbourhoods, emphasise their lack of policy status, with two key implications. First, these are only considered a material consideration in the determination of cases. This is, they provide further guidance on local plan policies, but they cannot add additional requirements and need to be carefully worded as recommendations and not requirements. Furthermore, applicants do not need to meet all guidance, only show how these have been considered. As a result, although innovative in their approach, SPDs are per se a weak tool. Second, SPDs are very much limited in their scope if not strongly hooked to upper-tier policy. Therefore, if national or metropolitan planning policy does not introduce a requirement or policy hook, the LPA cannot introduce new policy requirements. Indeed, while the strategic and building scale seems to be well covered by current policy, the intermediate scale seems to be significantly compromised by a lack of hook to national and metropolitan policies. We will review this next.

4.1.3. Intermediate Scale: Within the "Red Line''

Analysis of interviews indicates that local planners find the shaping of the intermediate scale as the most challenging aspect, particularly the delivery of open spaces that meet the scale of development, and the provision of social infrastructures that allow these neighbourhoods to keep up with residents' demand. An analysis of metropolitan policy (GLA, 2021) shows there are very few quantitative requirements and qualitative guidance to shape this intermediate scale beyond aspects of environmental impact. In this context, the TH policy team produced a master plan to guide and shape the growth of one of the largest vertical neighbourhoods in the borough and London, the South Quay neighbourhood in the Isle of Dogs (Figure 5). However, a visual analysis of what is being built on the ground suggests this policy document has not met its purpose and has been quite weak in ordering growth. Some interviewees have pointed to an underlying and structural issue in the area, the fragmentation of land ownership:

> The SQM tried to comprehensively plan for an area where tall buildings were emerging by establishing a street network, building form, etc. But developers were not willing or interested in that model. They wanted to maximise profit by developing to the maximum capacity within their red line. (Interview 7)

As the quote indicates, one of the reasons the SQM SPD perimeter blocks approach (Figure 6) had very little impact is the resistance from developers to assemble land to comprehensively redevelop the area. According to most interviewees, developers' resistance could not be overcome, given the nature of non-prescriptive planning in the UK as well as the Council's lack of economic capacity to execute compulsory purchase orders. However, some planners at the local and metropolitan levels suggested that despite the structural limitations of the planning system, the LPA could have engaged earlier and more robustly with developers, as well as developed this policy framework earlier and well in advance of the strong growth that took place there.

Finally, an important aspect precluding the successful shaping of the intermediate scale according to TH planners is the non-prescriptive and negotiation-based UK planning system. As the interviewee below explains, the SQM is more European in its approach as it sets an urban structure—with a street network and strategic open spaces—the building alignments, their maximum heights, as well as suggesting occupation rates. However, the UK planning system operates under a different model of negotiations, articulated through "balanced decisions"—in which a planning officer balances pros and cons as opposed to an application having to meet all policies—and through developers' contributions to address any harm the development might pose. An urban planner discusses the limitation this system poses to deliver good quality vertical neighbourhoods at the intermediate scale:

> This negotiation system is proving not to be fit for purpose in shaping areas where tall buildings are

> emerging. The scale of these developments requires larger open spaces. But the way we operate is each developer must provide open space within the red line. The result? We have a series of piecemeal and fragmented open spaces, but these are small. They do not respond to the scale of these neighbourhoods. We need to strategically create open spaces that are meaningful. (Interview 3)

As the urban planner points out, the scale of open spaces secured through planning in the Isle of Dogs is very deficient, as it does not match the scale (in terms of density and height) of the neighbourhood (see Figure 7). However, as the TH plan-making team prepares for the new iteration of the local plan, an important observation is made which sends a positive message for the future of intermediate-scale planning:

> Site allocations are now expected to be more like masterplans, setting open space requirements, housing targets, etc. It is much more prescriptive, but to do so we will need to be looking in detail at things such as economic viability, and environmental issues. It will require much more work at an early stage. I think the "battles" at the planning stage will be pushed earlier on in the process. Things will be agreed upon much earlier. (Interview 5)

According to the quote, this new approach will result in stronger policy guiding vertical growth. In this new scenario, local planners anticipate difficulties in the adoption process. In fact, they suggest that a new paradigm might be emerging in which negotiations between LPAs and applicants might be shifting from the planning stage to the plan-making stage.

4.2. Decision-Making

Despite having the policies that would allow planners at the local level to shape vertical neighbourhoods—although, with certain limitations as discussed in the section above—all urban planners at the local level reflect on the two structural limitations of the decision-making process: housing targets and alternative routes to cases' determinations.

4.2.1. Housing Targets

All planners at local and metropolitan levels recognise the huge pressure LPAs have to meet housing targets, which in the case of TH is the second highest across London's boroughs. Despite the good quality of local policies in place, urban planners explain that this imposition from higher tier government means they do not control the intensity and path of growth. According to

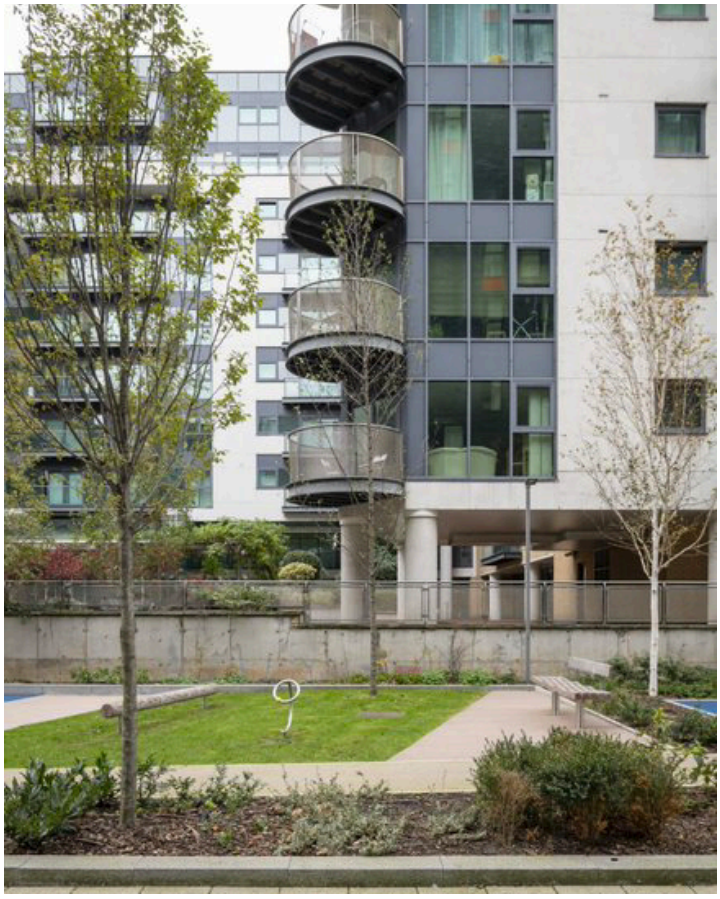


Figure 7. Play space in the Isle of Dogs. Source: Courtesy of Jim Stephenson.

interviewees, this factor significantly influences their decisions as they feel under pressure to support proposals that deliver as many homes as possible, sometimes having to prioritise quantity over quality. This is further exacerbated as there is a political commitment to deliver as many affordable homes as possible. Therefore, decisions tend to favour any development that meets between 35 and 50% of affordable homes. This mechanism of hierarchical control from higher-tier governments has been recently explored (Raco et al., 2022). However, from a negotiation and place-shaping perspective, an officer notes:

> These [housing targets] should not be an excuse that justifies the poor quality of some of these new neighbourhoods. I think officers are negotiating the quality of these buildings, the façade, flats, etc. But what is not being acknowledged is, if you know you will have to deliver this form of city, why don't you embrace it and let buildings go higher but protect enough street widths and enough open space between them? I do not think the number of flats or height is the problem, it's the occupation rates. We should always go back to place-making principles. Height is only one of the many parameters in the matrix. (Interview 2)

As articulated by the interviewee, despite the intensity of growth, planners can develop policies and negotiate applications shaping some key aspects of vertical neighbourhoods.

4.2.2. Appeals and Public Hearings

In addition to housing targets, interviewees have claimed that the main factor that has influenced the shape of TH's vertical neighbourhoods is two decision-making mechanisms for the determination of cases: appeals and public hearings. Indeed, appeals have been recognised in high-rise literature as an important governance mechanism in London. As reported by Appert (2012), this mechanism was used during Livingstone's mandate by the central government to control and stop the proliferation of tall buildings, hence as a form of national control over metropolitan powers. According to interviewees, this mechanism continues to play an important role in the form and shape of vertical neighbourhoods, this time also intervening at the local level:

> Appeals to the Secretary of State have been very influential in how the landscape of buildings has evolved. And these have set the precedent for future high-rise growth. A good example is Whitechapel Estate [Figure 8]. That is not within a tall building zone but they [Secretary of State] accepted it. And with some of those precedents, you know….We are always on the back foot, always behind….We know that if the case goes to appeal, the cost for the borough would be phenomenal. It does not mean that of course, we recommend something different as to what we consider a balanced and fair assessment, but it cannot be denied that it [previous appeals] is kept in the back of our minds as well as I am sure of the Committee. (Interview 3)

A report produced by the TH Strategic Planning Team (TH Council, 2019) corroborates to a certain extent the claim above. Data shows that between 2015 and 2019, 264 total major planning decisions were appealed to the Secretary of State. However, only three major decisions were overturned at appeal. This indicates that although this mechanism has not been significant in terms of cases overturning, its sheer volume has created unprecedented strain in a significantly under-resourced LPA. In fact, as pointed out by the interviewee and confirmed by

Figure 8. The Whitechapel Estate proposal permitted by the Secretary of State in 2017. Source: PLP Architecture and Adjaye Associates in Dunton (2016).

the report, the economic and human consequences—preparation of the process, officers' time, and consultants' cost to support the LPA through the process—are a tremendous burden. According to this report, an appeal of a major planning application can cost around £100,000.

Furthermore, a more recent mechanism of metropolitan determination commonly known as "call-ins,'' "public hearings," and/or "representation hearings" has been completely overlooked in academic research. This alternative route to the LPA's direct determination was introduced in 2008 as part of the Mayor London Order. Under this directive, the GLA can call in cases if considered of strategic importance—generally in terms of the number of units and height—before these are determined by the LPA. This alternative mechanism to obtain planning consent has been pointed out by interviewees as having had a great impact on the shape of vertical neighbourhoods in the borough: setting approved cases in a system that is primarily driven by precedents. First, interviewees claim that, since 2008, the GLA has called in numerous cases in the borough to give them permission in opposition to the criteria of the LPA and set the precedent of a tall building in an area. This means that cases brought forward later can claim the existence of a tall building in their proximity and replicate (if not increase) the height of their proposal. Columbus Tower, a 63-storey development, in the Isle of Dogs (Figure 9) is the first scheme the GLA called in, and, as the interviewee below explains, one of the first buildings in the Isle of Dogs clearly ignoring the stepping down principle:

> If you look at the cases that Boris called in when he was the mayor, you can see that the tallest buildings were consented to by him. Columbus Tower is an atrocious example of the mechanism he established. Nothing in that area justified that scale of height. He has had a key responsibility in how the borough has transformed. Once you have a few schemes of that height the pressure is enormous. Even if some of them were never built, the pressure on the Strategic Committee and the Council is enormous, there is the threat that the case can be called in and then the Council loses the ability to negotiate further contributions. (Interview 7)

An analysis of GLA call-ins in Table 2 shows that 30% of cases during Boris Johnson's administration were in TH. As argued by the interviewee, this mechanism not only sets a precedent that compromises more strategic planning of heights in an area or the overall quality of the architecture but more fundamentally it also jeopardises a key contribution method for the planning of the intermediate scale. This is because the GLA becomes the negotiator for section 106 contributions. However, on this point, there is disagreement among officers as some report being consulted and involved in section 106

Figure 9. Columbus Tower permitted by Boris Johnson's administration in 2009. Source: DMWR Architects in Jessel (2022).

Table 2. GLA's call-ins from 2008 to 2022.

Boris Johnson (2008–2016)							
2009	2010	2011	2012	2013	2014	2015	2016
1 (1)	1 (0)	1 (0)	2 (1)	3 (0)	3 (0)	2 (1)	4 (2)

Sadiq Kahn (2016–Current)						
2016	2017	2018	2019	2020	2021	2022
1 (0)	2 (0)	*3*(0)	5 (0)	5 (0)	3 (0)	2 (1)

Note: TH's call-ins between brackets.

negotiations despite TH not being the planning authority determining the case.

Although this mechanism has not been used by the current GLA's administration in TH as much as the previous one (only one case), this is still significant across other LPAs. Indeed, an interviewee pointed to the dual role the GLA plays in how these vertical neighbourhoods are shaped:

> The GLA has two "hats." You have the policy team that understands and supports us through quality-led and design-led proposals…but then you have the GLA "planning hat." And they are very uncritical, always pushing for more height and density. They are in many instances closer to the developer than to us. And that weakens our position. (Interview 6)

The GLA's conflicting role mentioned in the quote above has become more acute under Sadiq Khan, as the New London Plan's optimisation—with a quantity emphasis—and design-led approach—with a quality priority—are perceived by local planners as irreconcilable.

4.2.3. Too Much or Too Little Metropolitan Interfering?

Despite the consensus on how the hierarchical planning system and decision-making processes constrain the capacity of municipal planning and urban planners at the local level to design quality vertical neighbourhoods, two of the interviewed planners offered a dissenting view. The interviewee below suggests the problem of the proliferation of tall buildings of poor quality across London could be the result of not too much interference from the GLA but a rather weak metropolitan policy:

> A frustration I always had is the GLA pushes boroughs to do things, and each comes with its own interpretation. But as a city, you need a city-wide approach. It is a bit top-down, but there should be a principle of where tall buildings should be in London, not just permit some boroughs to allow new clusters of tall buildings in what seems quite arbitrary locations. It is alright to have tall buildings in the centre or the Canary Wharf, but when you have tall buildings in other random places then it impacts the overall skyline. And we don't want to see height in every town centre or in marginal areas. There, the quality of developments is not going to be as high, as good. You really want to avoid that. (Interview 12)

This opens the question as to whether the solution to achieve quality high-rise environments across London lies in the provision of more prescriptive policy at a metropolitan level. As the interviewee argues, this approach will not only be more robust in terms of design standards but also more comprehensive across boroughs.

5. Conclusions

Vertical urbanisation has primarily been explored and explained as a phenomenon driven by macro-level economic and political factors, such as the flows of capital (Nethercote, 2018) and urban neoliberalism (Rosen & Walks, 2013). The impacts of the emergence of these new urban landscapes have also been explored, but this has generally been assessed from a strategic perspective, primarily focused on heritage conservation and skyline management. Overall, the design and planning of vertical neighbourhoods have been described as a technical and rational matter, and fundamentally decided at the local level. In this article, I have argued that to understand the process of vertical urbanisation and to examine how these have been constructed and contested, a situated, multi-scalar, and multi-level governance exploration is necessary.

The multi-scalar analysis of vertical neighbourhoods in TH has shown that the policy framework targets three different scales: strategic, intermediate, and building. While TH planners working at different stages of planning think the strategic and building scales can be shaped by LPAs through the Local Plan and subsequent SPDs, the shaping of the intermediate scale is compromised by the discretionary and market-led planning system in the UK. Additionally, although the historical production of municipal planning policy regulating high-rise buildings and vertical neighbourhoods has been strongly conditioned and generally weakened by higher tier policies; recent changes at metropolitan and national levels indicate a more pro-active role is expected from LPAs to guide this form of growth. One of the key outcomes that

are expected is the shift of negotiation to the early stages of the planning development, which will provide the opportunity for a more comprehensive and project-led plan-making at the strategic, intermediate, and building scales.

Multi-level governance analysis has revealed that despite the robust policy framework that TH has had from as early as 2013, TH urban planners' ability to shape vertical neighbourhoods is compromised by decision-making governance structures and alternative routes for case determination. According to local urban planners, these have had a significant influence on the shape of vertical neighbourhoods, suggesting local democratic accountability has been compromised by the metropolitan government and proposing that LPAs' scope is reduced in a multi-tier governance framework. This is an important contribution to literature as the relationship between metropolitan and local government tiers is more complex and prone to tensions than has been depicted. The article concludes by suggesting that a solution to better shape vertical neighbourhoods may lay in a combination of upscaled planning of the strategic scale while enhancing the role of LPA in planning the intermediate and building scale.

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Conflict of Interests

The author declares no conflict of interests.

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Article

High-Rises and Urban Specificity: Politics of Vertical Construction in Paris, London, and Vienna

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Abstract
High-rise buildings have been experiencing a significant boom worldwide over the past two decades. This is true not least for European cities, where church steeples, town hall towers, and chimneys were the main vertical accents in city centers for a long time. This article focuses on the construction of high-rise buildings as a "glocal" phenomenon. The vertical building type has spread around the world, but approaches to it are site-specific and inextricably entangled with local problems, modes of action, and discourses. Construction strategies and discussions about tall buildings are quite diverse even in Europe alone. Presenting case studies of Paris, London, and Vienna, this article looks at three metropolises in which vertical building has caused particular unrest in recent years and reveals enlightening contrasts between them. In exploring the question of how distinctions are made in these cities between desirable and quasi-illegitimate buildings, or "possible" and "impossible" locations, I analyze city-specific patterns relating to vertical construction. Special attention is paid to urban planning—the activities of those actors who are responsible for developing strategies and implementing and concretizing legal regulations. The discussion draws on a larger research project and is based on the grounded theory research perspective. The data pool includes a large number of published and unpublished documents as well as interviews with actors from the fields of urban planning, architecture, and historic preservation. From a theoretical point of view, the article draws on reflections on the "specificity of cities" and "glocalization" in urban research.

Keywords
cityscape; glocalization; high-rise building; sociology of architecture; specificity of cities; urban politics

Issue
This article is part of the issue "Vertical Cities: The Development of High-Rise Neighbourhoods" edited by Brian Webb (Cardiff University) and James T. White (University of Glasgow).

1. Introduction

High-rise buildings have been experiencing a significant boom worldwide over the past two decades. After going through various cycles, the towering building type now plays a prominent role in debates about urban development and is shaping the face of cities more than ever before. This is especially true for China and the Gulf region, where metropolises are rising to the sky at a particularly rapid pace (Acuto, 2010; Graham, 2018; Ren, 2013). But such projects are also increasing in European cities, where—with the exception of Frankfurt—church and town hall towers and chimneys were the main vertical accents in city centers for a long time (Drozdz et al., 2018; Glauser, 2019). This trend towards a stronger verticalization of the cityscape touches on fundamental questions of urbanity and power in urban spaces and is highly controversial in many places.

This article explores high-rises as a "glocal" phenomenon. The towering building type has spread around the world, but approaches to it are decidedly site-specific and inextricably entangled with local problems, modes of action, and discourses. It would therefore be too short-sighted to interpret the worldwide spread of the vertical building simply as a trend toward standardization in a globalized world. In Europe alone, construction strategies and discussion constellations are highly diverse (Appert et al., 2018; Bach & Murawski, 2020;

Dixon, 2010; Greco, 2018). In this sense, vertical construction is a particularly illustrative example of the intertwining of globalization and localization dynamics in the contemporary world (Czarniawska, 2010; Robertson, 1995). Furthermore, it would be too reductive to simply trace local variations in high-rise buildings back to economic dynamics. The phrases "form follows capital" and "form follows finance" certainly identify some crucial aspects since a skyline does have economic preconditions. The construction of tall buildings, not to mention the development of entire high-rise clusters, requires a considerable concentration of capital and a willingness to invest in this way in certain places (Koster et al., 2014; Willis, 1995). However, while economic aspects are certainly important, they alone cannot account for how and why architectural patterns emerge in certain cities. In order to understand the current developments in dealing with vertical construction, it is crucial to take into account political conditions and especially the longer-term nature of cultural dimensions, which are the center of interest here (Charney et al., 2022; Glauser, 2019).

This article studies city-specific patterns in dealing with high-rise buildings based on the examples of Paris, London, and Vienna. It illuminates the politics of vertical construction and building strategies in these cities by analyzing predominant connotations of high-rise buildings and the logic applied to distinguish "desirable" from "quasi-illegitimate" buildings and "possible" from "impossible" locations. Special attention is paid to urban planning—the activities of those actors who are responsible for developing strategies and for implementing and concretizing legal regulations. The focus is primarily on the last twenty-five years, during which decisive shifts have become apparent in the three cities, but well-established socio-spatial patterns have also been reproduced. But what is considered a high-rise building? Even though this study primarily observes and explores different forms of definitional work in various cities, this is an important point to clarify. The definitions of when a building counts as a "high-rise" vary depending on the context. For example, while the International Highrise Award, which is presented in Frankfurt every two years, requires a minimum height of 100 meters, this limit is significantly lower in the building codes of many European cities, which specify a height of around 25 meters; this height is based, among other things, on the dimensions of the turntable ladders used by firefighters (Taillandier et al., 2009). Unless otherwise stated, this study largely shares this definition concerning the investigated urban practices.

From a theoretical angle, this article mainly draws on the conceptual reflections on the "specificity of cities" developed at the interface between architecture, sociology, and urban geography (Diener et al., 2015; Parnell & Robinson, 2017; Schmid, 2015). While early socio-scientific approaches in urban research focused mainly on the differences between metropolises and rural regions or small towns—typical of this is Simmel's (1903/1997) classic essay "The Metropolis and Mental Life"—in recent decades interest has increasingly turned not only to intertwined urban and rural developments but also to the differences between metropolises and the question of how the particularities of cities are formed and reproduced (Diener et al., 2015; Löw, 2012; Soja & Kanai, 2007). In connection with this, the question of comparing cities has acquired new priority and relevance (Robinson, 2010, 2015; Wood, 2022). The concept of the "specificity of cities" encourages us to study the characteristic features of a city comprehensively. On the one hand, it takes into account the materiality of the city and emphasizes the built "urban territory" as a starting point for further development which is thus crucial to understanding path dependencies: "The built environment cannot be changed overnight, or at least not without causing massive destruction and devaluation of existing investments. Thus an urban fabric arises that can often barely be fundamentally changed and can only be adjusted with considerable efforts" (Schmid, 2015, p. 295). The urban fabric is, in material terms, a major reason why towering buildings encounter very different local conditions as they spread globally. On the other hand, the theoretical focus—addressed by the term "power structures" understood in a broad sense—is on the multiple forces that shape the urban territory and the ways urbanization is steered and controlled (Schmid, 2015, p. 297). Special attention is given to regulations, characterized as "explicit or implicit rules of play that apply in a particular area," encompassing not only laws or explicit orders, but also powerful ideas of what a city should look like, what constitutes the respective city, and what does or does not fit in with it (Schmid, 2015, pp. 297–298). This aspect of formative images of cities is particularly relevant to understanding vertical construction and its underlying cultural dimensions, but it has received little attention compared to the formal and legal regulations of high-rise construction. Therefore, this article is especially interested in the prevailing modes of how Paris, London, and Vienna are interpreted by local actors. I will emphasize that the city-specific approaches to and ideas behind high-rise construction are closely interwoven with the prevailing images of the respective city. These images function as highly selective, interpretative models which are used as prominent reference points in high-rise strategies and justifications.

The discussion of city images as powerful interpretative models is further explored by illuminating city-specific patterns of observation, comparison, and imitation. The theoretical inspiration for this is drawn from the perspective of Scandinavian institutionalism or "discursive institutionalism" (Alasuutari, 2015; Czarniawska, 2010). Examining such patterns and looking at which other cities function as reference points for a given city is crucial to understanding the circulation and local appropriation of globalized patterns such as the tall building type (Czarniawska, 2010; Jacobs, 2006). Practices of observation and comparison are closely

linked to the representations of a given metropolis; what does or does not constitute a particular city is never imagined in isolation from other places. The way urban actors direct their attention to and focus on other cities (as positive or negative points of reference, as being similar or different) can be conceived of as a process of "identity and alterity construction" (Czarniawska, 2010, p. 15–16). It is characteristic of this perspective that negative references are considered just as relevant as positive references for understanding what makes a city tick in terms of self-definition (Czarniawska, 2010, p. 33). A primary goal of this article is to illuminate how the dynamics of "identity and alterity construction" are related to specific approaches to vertical building.

The following discussion draws on a larger research project on the politics of vertical construction in European metropolises based on the grounded theory research perspective (Bryant & Charmaz, 2010; Strübing, 2019). This approach is defined by a close connection between fieldwork, data collection, and data analysis. The field research for this project, including conducting interviews, mainly took place between 2010 and 2015. In this period, important political, legal, and building developments occurred in relation to high-rise construction in the three cities of interest. To examine the most recent trends, additional research was undertaken on regulations and building dynamics. The data pool includes a large number of published and unpublished documents, such as legal foundations (building codes and regulations), high-rise concepts and mission statements, policy position papers, urban development studies, documents related to historic preservation, and articles in the press. Furthermore, the study is based on 23 topic-centered, non-standardized interviews conducted with actors from the fields of urban planning, architecture, and historic preservation in Paris (5), London (5), and Vienna (6), as well as with certain relevant experts in these fields based in other countries such as Germany, Switzerland, and Spain (7). Last but not least, this study draws on a particular ethnographic method of urban research that Burckhardt (1995/2015) called "strollology." To understand the formative architectural structures as well as the much-discussed lines of sight, extensive on-site explorations in the three cities were essential, especially in the first phase of the research project.

Presenting case studies of Paris, London, and Vienna, the article focuses on three metropolises in which vertical building has caused particular unrest in recent years (Charney et al., 2022; Glauser, 2019; Guinand, 2020). Revealing contrasts between these cities become apparent here, particularly against the backdrop of certain shared traits. Each of these three metropolises is the capital of a (largely) centralized country and a highly frequented tourist destination. From a global perspective, they are also important economic, cultural, and political centers, albeit with different emphases. The contemporary urban forms of these cities are the result of complex formation processes that have taken place over centuries and are thus the product of various societal conditions and building strategies characteristic of them. In urban research and architectural history, these metropolises have received special attention not least because, in the second half of the 19th century, when they were among the largest cities in the world (and, in the case of London and Paris, the centers of the largest colonial empires), they became the scene of radical, standard-setting urban transformations (Benjamin, 1935/2006; Jacobs, 1994; Olsen, 1988). Concerning the 20th century and the formative role of the Cold War, it is important to consider that these cities only bring with them the experience of one side of the East–West divide in Europe. Although they have provided important examples of socialist or social-democratic housing construction in certain phases of history—particularly noteworthy in this context are the intensive building activities associated with "Red Vienna" in the interwar period and the projects of the Greater London Council (1965–1986) in London (Blau, 1999; Harnack, 2014)—these cities are strongly shaped by a capitalist societal and economic context and are lacking experience of state socialist urbanism (Hatherley, 2016; Stanek, 2020). As a result of political prioritization and the presence of strong heritage lobbies, the architectural heritage in each of these cities today is the focus of (re)staging and is almost excessively managed. At the same time, urban actors in all three cases are striving for a "modern," contemporary cityscape to a certain degree—and they are taking different paths in doing so, as will be outlined in more detail below. There are, in principle, countless ways to compare Paris, London, and Vienna. Based on a grounded theory approach, I have deliberately refrained from comparing the three cases along predefined, standardized dimensions. Rather, this research perspective is based on continuous comparison in the closely interwoven phases of data collection and analysis (Czarniawska, 2010, p. 4–5). Against the background of the theoretical considerations outlined above, the aim is to reconstruct the categories relevant to the specific urban contexts and also to focus on how local actors themselves compare cities when discussing the respective high-rise policies.

2. Paris: Beauty (*beauté*) Above All: Towers and a Ring Road as a Picture Frame

Paris is an illuminating case as regards vertical construction in that the city has adopted quite different and even contradictory strategies in its history of dealing with the towering building type. On the one hand, Paris has been an important source of impetus for high-rise construction. This is particularly true of the construction of the Eiffel Tower (324 meters) for the 1889 World's Fair and, from the 1950s onwards, the development of the La Défense office district in the west of Paris—outside the city limits but closely connected to the center (Barthes, 1979/1997; Evenson, 1981; Marrey, 2008, p. 31). On the other hand, high-rise buildings

have been almost completely banned from the city for a longer period, largely as a reaction to post-war vertical construction efforts. Between the late 1950s and mid-1970s, not only were numerous high-rise developments built in the suburbs of Paris, but there were also determined efforts (now mostly forgotten) to transform Paris *intra muros* into a veritable high-rise metropolis (Cupers, 2014; Marrey, 2008, p. 34). During this period, the towers built in Paris were among the tallest in Europe at the time, such as the 1973 210-meter Tour Montparnasse (Figure 1). Yet these vertical ambitions came under heavy criticism in the context of real estate scandals and generally changing political, social, and economic conditions. Particularly among the political elite, the prevailing conviction was that there should be no high-rise construction on Parisian urban terrain—high-rise buildings should only be realized beyond the city limits (Sandrini, 2014). In 1977, strict height limits were introduced that were practically tantamount to a ban on high-rises in the whole city. Building heights were limited to 25 meters for the inner districts and 37 meters for the outer districts, and several vertically ambitious building projects that had already been approved were stopped at the highest political level (Marrey, 2008, p. 37). Thus, within a few years, the attitude towards vertical construction in Paris fundamentally changed; instead of becoming a vertical city, Paris developed some of the world's most restrictive building regulations.

From the early 2000s onwards, Paris began to rediscover vertical buildings, and its strict attitude towards vertical construction has increasingly been questioned. It is no coincidence that this came at a time when the topic of high-rise buildings was in the air in other cities, too; London in particular set the course for more vertical construction (Charney et al., 2022; McNeill, 2010). Bertrand Delanoë, a member of the Parti Socialiste and mayor of Paris from 2001 to 2014, signaled as soon as he took office that the limits for vertical building in the city should be reassessed. This position was supported by renowned French architects, namely Dominique Perrault, Jean Nouvel, and Christian de Portzamparc, who also publicly advocated an end to the ban on high-rise buildings in Paris (Marrey, 2008, p. 40). This triggered heated debates; high-rise construction has been highly controversial in Paris, and the idea of increasing the building heights came close to a taboo. After several years of disputes, the city parliament decided in 2010 that building practices should be opened up for individual high-rise buildings with special aesthetic qualities, with a maximum height of 180 meters and at a clear distance from the city center and its historical structures (Glauser, 2019, pp. 78–80; Mairie de Paris, 2011). It is no coincidence that the six potential new high-rise locations that had been evaluated by experts in the years before at the behest of the city government and planning authorities are all

Figure 1. Tour Montparnasse, Paris. Source: Photo by © Martin Argyroglo.

close to the city limits and the Boulevard Périphérique (Marrey, 2008). Furthermore, it is significant that recent vertical building projects on Parisian urban terrain have been entrusted almost entirely to "star architects"—that is, architectural offices symbolically consecrated by the award of the Pritzker Architecture Prize and aptly characterized by Sklair (2010) as producers of "iconic architecture," closely intertwined with capitalist globalization (Gravari-Barbas & Renard-Delautre, 2015). The Renzo Piano Building Workshop is responsible for the new courthouse in the Clichy-Batignolles district; the architects Herzog & de Meuron are behind the design of the Triangle building to be erected at the Porte de Versailles exhibition center; and the Atelier Jean Nouvel designed the Tours Duo 1 & 2 built in the Masséna-Bruneseau quarter (Figure 2). It is no coincidence that all of these architects have made a name for themselves primarily through the design of museums or concert halls and have a comparatively "artistic" image (Foster, 2011; Gravari-Barbas, 2020).

Figure 2. Tours Duo, Paris. Source: Photo by © Martin Argyroglo.

An urban planner in Paris explained the official agenda in an interview: high-rise buildings in Paris were to be built only in a few individual cases—as monuments in the form of "some very beautiful towers"—in locations where the dazzling new projects should signal an improved connection between the suburbs and the city of Paris and "add intensity and attractiveness" to sites near the Boulevard Périphérique ring road, which are characterized as urban problem zones due to heavy emissions and limited permeability. Urban planning and development policies continue to be guided by the principle that the center of Paris should be characterized by historical structures and that eye-catching new towers can only be tolerated on the periphery (in the truest sense of the word). The relevant urban planner justifies this with the argument that historical structures lend Paris its particular *beauté* or "beauty":

> What makes Paris beautiful and charming is above all its architectural unity. We think that it is more interesting for the reputation, the attractiveness of Paris to preserve this urban form, rather, I would say almost, than to disfigure it by putting a tower next to Notre Dame, for example, or a tower next to the Louvre.

The prevailing understanding of Paris which underlies this approach is that the city is an outstanding example of beauty that has evolved historically, if not the most beautiful city in the world. This formulaic and seemingly self-evident description of Paris has been influential since the 1970s and is closely linked to the idea that anything that could endanger the beauty of Paris should be kept out of it (Marrey, 2008; Sandrini, 2014). Key dimensions of the "urban territory" in this context are the city limits, materialized in a peculiar way in the Boulevard Périphérique ring road built between 1963 and 1973 to replace the city walls of the mid-19th century (*fortifications de Thiers*; Figure 3; see also Cohen & Lortie, 1992; Cupers, 2014; Schmid, 2015, p. 298). They function as a symbolically important distinction and kind of "picture frame." Anything that is not clearly singular or that evokes associations of quantity rather than quality—high-rise buildings in clusters, for example—is excluded from Paris proper and relegated to the

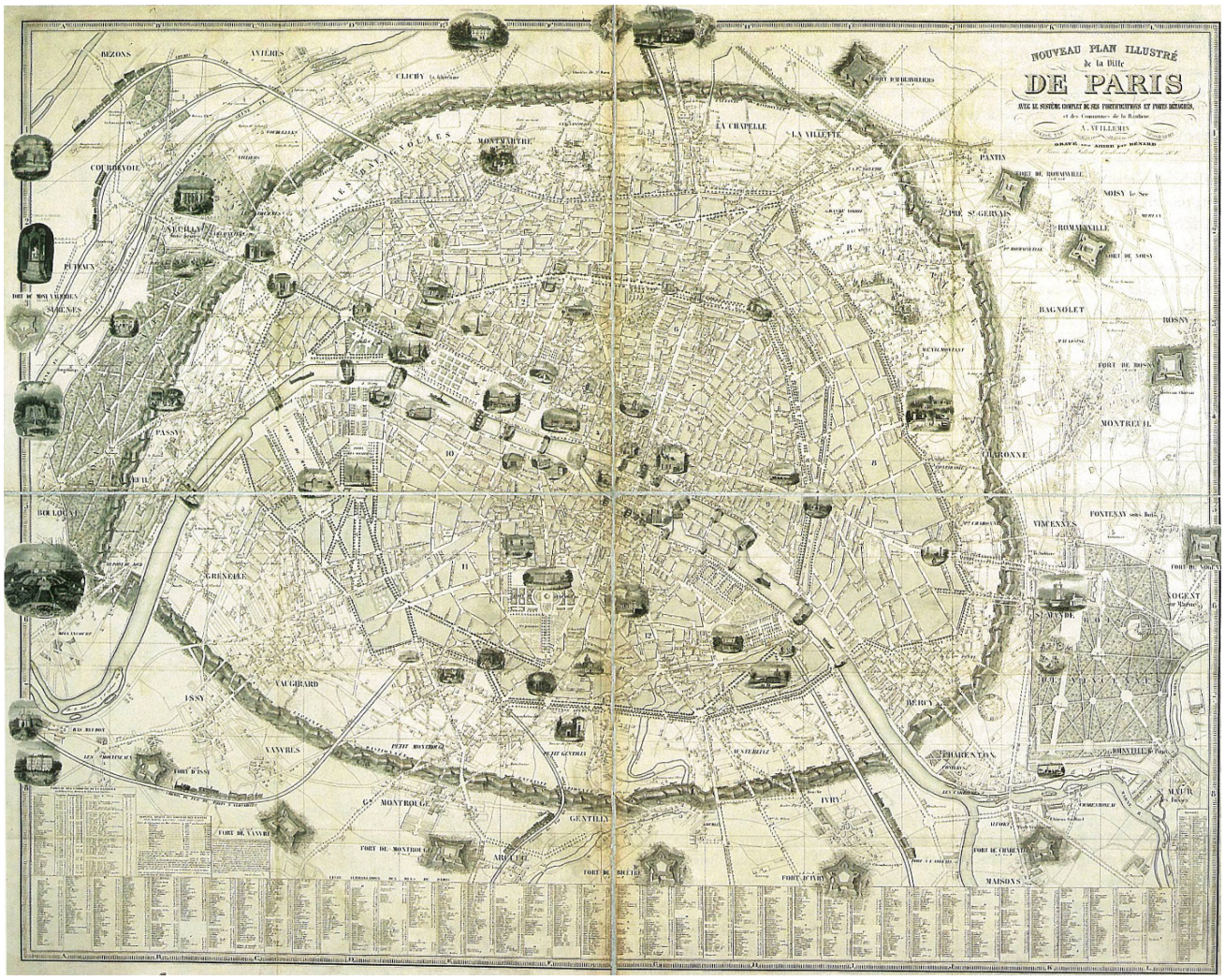

Figure 3. The new illustrated map of Paris, 1847. Source: Pinol (1996, p. 43).

suburbs (La Défense remains a key location for office towers). The relationship between Paris and its diverse suburbs is characterized by the interviewed urban planners mainly as a complementary one, and a staff member of the urban planning department stresses that "everything fits together quite well." This should not, however, obscure the fact that we are talking about a distinctive, long-established center–periphery structure. It is important to emphasize that the gesture described above has not only been effective in relation to buildings in Paris but also in relation to social groups. The tendency to displace dominated classes to certain suburbs was already characteristic of the radical urban restructuring under Haussmann during the Second Empire (1852–1870), and it has been a predominant pattern again since the 1970s in connection with migrants from the territories of France's former colonies (Castel, 2007; Lefebvre, 1968/2005). The distinction between Paris *intra muros* and the *banlieues* is widely embedded in power relations, both from a material and a symbolic point of view, and is thus also linked to questions of social inequality, even though the suburbs are by no means homogeneous, especially in socio-economic terms (Castel, 2007; Le Galès, 2020).

Even if, after 33 years of banning high-rise buildings, the construction of new towers is sometimes regarded as a kind of revolution in Paris, it is important to remember that when dealing with vertical construction, patterns are being applied that are by no means new but are strongly anchored in history. This also applies to predominant orientation patterns. The fact that high-rise construction became such a pressing issue in Paris in the early 2000s is no doubt closely linked to the fact that London was clearly setting the course for increased verticalization in the same period. The city of London has been an important reference for Paris for centuries (Olsen, 1988), and the British capital stands out clearly as an unrivaled reference point in the current discussions about vertical construction in Paris. What is striking about London is that it serves as the favorite example of both proponents and opponents of vertical building. When the former—particularly representatives of the fields of urban planning, architecture, and journalism—point out the danger that Paris could be left behind in terms of contemporary architecture, London often tops the list of cities exerting a kind of pressure to act. It usually sits alongside Barcelona, Rotterdam, Vienna, Frankfurt, and sometimes Berlin, all of which are Western European metropolises (Taillandier et al., 2009). Conversely, those who associate the increased construction of high-rise buildings with the ruin of Parisian beauty typically also refer to London. These references, however different they may be, are always presented as self-evident. It simply seems to be "clear" in Paris that London is thematically relevant. Even though actors in Paris are obviously not interested in directly imitating London's approach to the high-rise issue—as we will see in the following section, London is taking a completely different and much more radical path in this respect—and although Paris deals with high-rise construction in a very specific way, there is a clear connection between vertical construction in Paris and London on an observational level.

3. London: Verticalization of the Center and the Obsession With a "Global City Look"

The cityscape of London has changed drastically in the last two decades. While the British capital was long considered the epitome of a "scattered city" (Rasmussen, 1937, p. 23), mainly characterized by extensive flat structures, today it is one of the few European metropolises—together with Frankfurt, Istanbul, and Moscow—in which entire clusters of towers are growing skywards even in central locations. More than in any other Western European city, the London city government and planning authorities banked on tall buildings and set the course for London to achieve a high-rise skyline in a short period (Charney, 2007; Glauser, 2019, pp. 99–100; McNeill, 2010). Their strategy aimed at nothing less than a verticalization of the city's historical and economic center (Craggs, 2018; Tavernor, 2004). In and around the actual City of London with its banks and insurance companies—but now in many other parts of the metropolis as well—numerous towers have been erected in a veritable *tour de force*, some of which are among the tallest in Europe. This is especially true of the Shard London Bridge, a 310-meter high-rise designed by Renzo Piano (Figure 4). London has thus departed from the idea common in other European cities that the city center should be essentially defined by its historical "heritage.'' This idea was also influential in London until the 1990s, and it was embodied by the initially "decentralized" development of clusters of high-rise buildings from the 1980s onwards in Canary Wharf, London's former dockland area (Carmona, 2009; Jacobs, 1994, p. 760). How is it that so many towers have been built in the center of London within just a few years, against the fierce opposition of English Heritage, while in Paris only a few solitary high-rise buildings at the edge of the city have provoked years of political tug-of-war? How do municipal and planning authorities justify the construction of high-rises even in the proximity of historic buildings and structures? And what interpretation of London underlies these policies?

London's dramatic verticalization has undeniable social and socio-economic implications (Atkinson, 2019), but it is by no means a direct response to economic conditions. Instead, it is largely the result of an urban policy that was set in motion in the context of New Labour, especially under the former mayor Ken Livingstone (Charney, 2007; Gassner, 2020). It is worth noting that municipal and planning authorities have justified the dramatic verticalization of the cityscape only in part through references to economic "constraints" or the principle of densification, which has been extolled as

Figure 4. The Shard, London. Source: Photo from © Moment Open/Getty Images.

a cardinal virtue even though it barely stands up to a reality check—generally speaking, the taller a building is, the more its densification potential and resource efficiency decline, mainly due to safety, distance, and zoning regulations. This was clearly pointed out by a commission engaged by the British parliament as early as 2002 about the planned towers in London (House of Commons, Transport, Local Government and the Regions Committee, 2002). Significantly, municipal and planning authorities have also justified the push for vertical construction with the argument that tall buildings are "appropriate" to the appearance and representation of London (Tavernor, 2004). Such justifications, which relate to symbolic and aesthetic criteria, have typically involved the use of metaphorical language which draws parallels between structural verticalization and figurative vertical aspirations and emphasizes London's supremacy as a world metropolis in Europe. In a political position paper, for example, former mayor Ken Livingstone advocated high-rise construction in London as follows: "London must continue to grow and maintain its global pre-eminence in Europe. London must continue to reach for the skies" (Greater London Authority, 2001, p. 4).

A particularly widespread pattern of explanation and justification stresses that London is one of the most important global cities, together with New York and Tokyo, and therefore needs a "global city look" to adequately express its position as an outstanding financial center and world metropolis (Ren, 2011, p. 13). This interpretative model is almost omnipresent and has to be seen in the light of British colonial history and the role of London in this context. The concept serves as a substitute narrative for the characterization of London as the "heart of the Empire" (Jacobs, 1994, p. 760), which was formative for a long time and brought London into focus as the center of the greatest world empire in history (King, 1990/2015). This substitute narrative, which defines London as one of the world's most important global cities, is readily available when it comes to "explaining" the recent construction practice of the British capital and justifying the "necessity" of a skyline. Corresponding ideas appear both in interviews with urban planning representatives and in statements by politicians, as well as in academic papers (Tavernor, 2004). It is particularly revealing that even those actors who are skeptical or dismissive of the newer high-rise construction in London seek to give meaning to it in this way. The following example illustrates this: Peter Miller (pseudonym) works in London as a consultant on urban design issues, was involved in the planning of the Shard skyscraper, among other projects, and has prepared expert reports for local authorities in various other European cities. When interviewed, he said there is no question that the verticalization of London is strongly linked to image considerations. He is convinced that the city government's primary aim with the new towers was to present London visually as a "modern new city." The size of the buildings plays a central role in this: "I think there was a very strong feeling that iconic buildings should be tall. That was a statement. And even more that they have to be clustered." Although Miller is critical of high-rise construction, he defends it, arguing that London is big enough—"twenty-two million people, if you take greater London"—and has enough investors to

afford a skyline. His perspective assumes a positive correlation between the size and economic importance of a city and the height of its buildings. During the interview, he repeatedly emphasized that London plays a special role in Europe, and he vehemently denied the idea that Paris is a suitable city for comparison: "London is a different level. You have to take it at a different scale." In his account, only the cities of Tokyo and New York are adequate as references ("the three critical global cities").

This pattern of characterizing London is similar in nature to the dominant pattern of interpretation which states that Paris is a city of outstanding beauty, if not the most beautiful city in the world. These shorthand city descriptions have the character of "certitudes" that are brought into play as a matter of course in the discussion about urban policies and city (image) questions. They are handy and convincing because the selectivity and contingency of the respective interpretations remain largely hidden and thus beyond the reach of questioning. However, these characterizations are by no means neutral; they look at these metropolises from a very specific angle, which makes interventions in the urban territory appear to be selectively (in)appropriate (Schmid, 2015, p. 298). In the case of London, it is noteworthy that the most prominent shorthand formula used to characterize the city since the 1990s and justify its verticalization is linked to a social science discourse and seems to get its power of definition not least from this connection (Brenner & Keil, 2006; King, 1990/2015; Sassen, 1991/2001). The term "global city" has also been present in the world of city rankings for some time, namely, in the form of the Global Cities Index produced by the consulting company A.T. Kearny. The construction of this index is only loosely linked to the social science concept of the global city. The index mainly claims to account for the "global elite" and applies the term "global city" less as an analytical category and more as a label. This use of the term bears similarities to the way it is employed to characterize the city of London in high-rise debates. There, too, the discourse around London as a global city is not primarily analytical, but it clearly has a normative bent to it. When actors in London describe the metropolis as one of the (three) most important global cities, they are suggesting that the city is of special significance worldwide and plays a leading role.

With regard to "identity and alterity construction" (Czarniawska, 2010, p. 16) in London, it is important to emphasize that, in the debates about high-rises and the cityscape, the British capital is generally clearly distinguished from the "Continent" and other European cities, the significance of which is strongly relativized. As a complement to the recurring explicit references to New York (and, to a lesser extent, Tokyo), it is suggested that European cities are of little significance as points of reference for London, either because they are too small or, as in the case of Moscow or Istanbul, because they are not relevant enough or too "different." The idea of comparing London with other European cities is tantamount to a taboo. The same is true in a global perspective for comparisons with (vertical) Asian metropolises such as Singapore, Shanghai, or Hong Kong; the UK had colonial relationships with some of these cities until very recently, the effects of which still linger (Jenni, 2015; Ren, 2013). And while much of the investment in London's real estate market comes from Qatar, China, or Russia, in the context of urban planning and urban policies, great pains are taken to avoid associating London with metropolises in these countries—i.e., with any cities other than New York and Tokyo (Atkinson et al., 2017).

4. Vienna: High-Rise Construction as a Symbol of Regained Centrality

In some respects, the approach to vertical construction in the Austrian capital stands between the urban planning and high-rise policies of London and Paris. In Vienna, the high-rise building has become a widespread phenomenon, particularly since the early 1990s—after the fall of the Iron Curtain and Austria's accession to the European Union in 1995. In this euphoric phase of construction, many new high-rises were erected in just a few years (Glauser, 2019; Seiß, 2007). Based on the semantics of internationalization and the concept of Vienna as a "hub between East and West," the Vienna municipal government and planning authorities initially pursued an aggressive strategy in dealing with vertical construction (Grubbauer, 2011, p. 20; Musner, 2009). Similar to London, the envisioned spatial order did not call for a rigorous separation of historical and contemporary striking architecture. Instead, the aim was to interweave old and new. High-rise buildings were therefore also planned in central locations in the city. Though the municipal and planning authorities refrained from allowing vertical projects in the first district of Vienna, tall buildings were planned, and some were even built, in the zones and districts immediately adjacent to it.

However, the efforts to combine historical and contemporary striking architecture soon collided with the strategy pursued at the same time by the Austrian government to have the entire city center of Vienna recognized as a UNESCO World Heritage Site. The approval by the UNESCO World Heritage Committee in 2001 to classify the "Historic Centre of Vienna" as a universally significant urban artifact amounted to a kind of refortification of the city center, as delineated by the Ringstraße (Musner, 2009, p. 21). In conjunction with this classification, UNESCO formulated relatively strict principles not only for the "core zone" but also for the "buffer zone" (covering large areas adjacent to the core zone) to prevent visible change in the cityscape on the level of the built urban territory as well as in the city's prominent sightlines (UNESCO, n.d.). This new regulation of the urban territory caused central locations in the city to become particularly explosive and controversial terrains for striking new architecture. Over the last 20 years, the Viennese municipal government has repeatedly clashed

with the UNESCO World Heritage Committee; the arguments reached their peak (to date) in July 2017 when the "Historic Centre of Vienna" was inscribed on the List of World Heritage in Danger in response to plans to build a 66-meter high-rise for luxury apartments near the Heumarkt (the "core zone" of the respective world heritage site; see Guinand, 2020). Against the background of these years-long conflicts, the municipal government, and planning authorities eventually began to focus their high-rise planning—if not consistently, then at least more than they had originally—on decentralized locations in the city, namely, in an area on the other side of the Danube, close to the UN headquarters and at a clear distance from the historic center. It is no coincidence that the tallest building in the city—the DC Tower 1 with a height of 250 meters designed by French architect Dominique Perrault—rises into the sky on this site (Figure 5).

Vienna's high-rise strategies have therefore tended to converge with those of Paris, insofar as old and new structures are spatially and visually clearly distanced. However, this should not obscure the fact that the towering building type has very different connotations in the two cities, which is mainly due to divergent historical experiences. While in Paris this building type is often associated with soulless office architecture, ugliness, or social problems (and recently even with terrorism), in Vienna it generally has more positive connotations and continues to stand for modernity and overcoming marginality. At the same time, the fact that the city center is dominated by historical structures is comparatively controversial in Vienna and characterized by ambivalence. While historic structures are almost unanimously associated with beauty in Paris, in Vienna they have by no means only positive connotations. In the interview with a municipal official responsible for high-rise construction, he pointed to the cranes visible from his office in the city center and emphasized, not without pride: "Vienna is growing again….In the eighties, Vienna still had a bit of a depressive mood. Iron curtain, non-EU. We did well, but we were a bit in a vacuum." For him, these (construction) dynamics are a necessary component of a vibrant city and an essential counterweight to its architectural heritage. In an indirect way, this is a criticism of the prevalence of the historic building structures advocated by historic preservationists. This problematization has a certain tradition in Vienna, since its building heritage bears witness to a time when Vienna was the center of a vast monarchy and not the capital of a small state, as it is today. In this respect, the city's architectural heritage recalls Vienna's loss of significance (Musner, 2009).

The approach in Vienna also has specific features in terms of observational patterns, comparative practices, and shorthand descriptions of the city. While in London and Paris, specific individual metropolises determine

Figure 5. Donau City, Vienna. Source: Photo by © Hertha Hurnaus.

the field of observation and function as references, the situation in the Austrian capital is more complicated. Depending on the actors or documents in question, various cities emerge as central points of reference, namely Chicago, San Francisco, New York, Paris, and London (Tillner, 2001). Nevertheless, in Vienna, too, these references are by no means arbitrary or removed from collective practice. Instead of a particular city, it is a particular line of vision that shapes the practice of orientation in Vienna and thus also "identity and alterity construction" as described by Czarniawska (2010, p. 16). The dominant perspective here views cities to the west of Vienna as potentially interesting points of orientation, while simultaneously assuming that cities to the east (namely, the capitals of Eastern European countries) are oriented towards the city of Vienna. This clear westward focus and the taboo against an eastward orientation are remarkably consistent in Vienna. This pattern emerges not only in the perspectives and documents of urban planning authorities but also in the opinions of heritage conservationists, whose perceptions are otherwise quite different from those of urban planners in Vienna.

This orientation perspective seems to emerge automatically and is in a peculiar state of tension with the prominent characterization of Vienna as a "hub between East and West" (Grubbauer, 2011, p. 20). This shorthand description—which has been in circulation since the 1990s and was used by the city of Vienna extensively in image campaigns—suggested symmetrical relationships. But when it comes to Vienna's reconstructed patterns of orientation, there is no hint of the kind of symmetrical relationship implied by the idea of a hub. Interestingly enough, this contradiction hardly seems to be noticed in practice. This and the fact that the one-sided perspective from East to West comes into play so effortlessly points to well-established relations of orientation, whereby the constellation of the Cold War clearly seems to be having an aftereffect. This also manifests in certain perceptions of Vienna as a "marginal" city with a special affinity for the morbid (a topos that is expressed particularly trenchantly in Georg Kreisler's song *Death Must Be Viennese*) and with alleged deficits in regard to modern structures that need to be remedied following the example of Western metropolises. This understanding of Vienna as a city that needs to "catch up" is not consistent, but it emerges in interviews with older actors who were around retirement age at the time of the interview, and who sometimes explicitly refer to the fact that the Iron Curtain was just 50 km away from Vienna. Nevertheless, this understanding does seem to play an important role in the perception of high-rise construction in Vienna. It is not only (or even primarily) the vision of Vienna as a hub that makes vertical construction appear to be appropriate here; the city's supposed lack of contemporary structures also makes the trend towards verticalization a largely welcome development (Guinand, 2020).

5. Conclusions

If we look at how high-rise buildings are connoted and used in different cities, it becomes clear that they do not have a fixed meaning. The way they are perceived and judged and what they (can) signify have distinct spatially and temporally features and vary widely according to context. In London, clustered high-rises are praised by planning and municipal authorities as indispensable ingredients of a global city that place this metropolis in an exclusive league together with New York and Tokyo. Meanwhile, in Paris, the towering building type is primarily present as a threat to urban beauty and is only desired in very special forms—as solitary buildings or "monuments." In Vienna, in turn, high-rises are largely a symbol of overcoming marginality and regained prosperity. A central reference problem in urban planning in all three cities is the relationship between the historic city center and newer striking buildings or "iconic architecture" (Sklair, 2010). The debate on new, towering architecture is closely intertwined with the question of how architectural history is to be evaluated, whereby the defining power of the international organization UNESCO also plays a central role (Glauser, 2019; Musner, 2009). Typically, it is not the height of a building itself that is currently or potentially in dispute, but rather its size in relation to the adjacent buildings; this was particularly the case with the controversial building project close to the Heumarkt in Vienna, which despite its relatively modest height of 66 meters became a veritable bone of contention in this context. The metropolises examined here answer this controversial question in markedly different ways. While Paris and Vienna—albeit for different reasons—adhere to the model widespread in Western Europe that the city center should be shaped by historic structures, and that old and new eye-catching architecture are to be clearly separated spatially and visually, London has taken a different path, setting a course (several years before the vote for Brexit) to move away from this model, not only in terms of construction but also concerning relevant orientation points.

The specificity of these cities in which the actual high-rise policies are based was explored mainly in relation to the prevailing images of the cities—the predominant models of interpretation that characterize the respective city's essence—and, closely linked to this, the reference cities that reflect their central horizons of observation and points of orientation. As we have seen, such (powerful) ideas of what constitutes a respective city and what does or does not fit in with it are largely unquestioned by local actors and typically shared by both opponents and supporters of high-rise buildings. The particular logic behind these models of interpretation and fields of observation, as they shape questions of urban planning and politics in Paris, London, and Vienna, has developed in the close interplay of the individual city's history and broader geopolitical constellations. In contrast to city rankings, in which numerous

cities (typically worldwide) are placed in relation to one another, the historically ingrained, reconstructed reference relationships are characterized by reduced and specific orientation patterns. The fixation of Parisian actors on London, the strong distancing of actors in London from the "Continent" as well as from a multitude of larger metropolises other than New York and Tokyo, and the omnipresent East-West orientation in Vienna are surrounded by taboos and quasi-implicit prohibitions against comparison. Thus, they are intimately linked to questions of "legitimate" identity and alterity construction and reflect longer-term cultural dimensions. These include the crucial patterns of responding to historically formative constellations, namely, how colonial history or the Cold War are (implicitly) addressed in different cities. These patterns and their genesis deserve to be studied more closely on a global level, as they profoundly affect the way cityscape issues and high-rise buildings are approached today (Bach & Murawski, 2020; Parnell & Robinson, 2017).

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Article

Housing in Germany and the Rebirth of the High-Rise in Post-Modern Urban Design

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Abstract
High-rise buildings were a frequent design element in modernist urban planning and architecture. However, both the criticisms modernism faced and the negative experiences with large housing estates dating from that period led to post-modern designs that built strongly on traditional pre-modernist urban form. Despite the role of high-rise buildings in office areas, many brownfield and greenfield housing developments from the 1980s to the 2000s reflected this trend and abandoned high-rise buildings almost completely in Central Europe. Only recently, a renaissance of high-rise buildings as design elements for housing projects can be noted. The article traces this development by analyzing major design projects in Germany and offering explanations for this trend linked to major socio-cultural transformations and urban design innovations. It looks at the role of architects, urban designers, and other stakeholders in promoting hybrid urban design models and presents major strategies by cities under development pressure that try to manage their evolving skyline. Case studies deal with the five largest German cities of Berlin, Hamburg, Cologne, Munich, and Frankfurt am Main.

Keywords
Germany; hybrid urbanism; residential high-rise; urban design typology

Issue
This article is part of the issue "Vertical Cities: The Development of High-Rise Neighbourhoods" edited by Brian Webb (Cardiff University) and James T. White (University of Glasgow).

1. Introduction and Methodology

European cities can hardly be described as "vertical cities," especially when considering residential neighborhoods. Important service metropolises such as London, Paris, or Frankfurt am Main have classic "cities" with a perceptible skyline, but there are far fewer high-rise buildings in less important cities. In residential quarters of European cities, high-rise buildings play a special role, especially in large housing estates designed according to the principles of the architectural-urban modernism of the 20th century. They are often part of larger social housing settlements, which, for a number of reasons, came under massive criticism towards the end of the 20th century (Graham, 2015). While social stigmatization is often overcome by redevelopment attempts with considerable social consequences, newer developments with neotraditional urban structures have spread in many places (Fishman, 2011; Helleman & Wassenberg, 2004). In the following, I call them "post-modern" (following the German notion *nachmodern* in Flecken, 2000) to denote that they can be seen as an echo of the critique of modernist urban design (Baldwin Hess et al., 2018; Grant, 2005; Hall, 2014; McCall & Mooney, 2018; Thompson-Fawcett, 2003; Zukin, 1988). Especially since the 1990s, a gradual renaissance of concepts consciously making use of residential high-rises has taken place in newly developing residential neighborhoods in a wider context of verticalization with the help of iconic architecture (Drozdz et al., 2018; Glauser, 2020; Greco, 2018; Harris, 2015). While particularly high-rise condominium housing has reshaped property and everyday life substantially (Lippert, 2019; Nethercote, 2022), it is worth mentioning that they have only gradually and selectively gained prominence in Europe. In contrast to "modern" urban quarters, high-rise residential and mixed-use neighborhoods often combine modern and traditional elements to form hybrid urban patterns.

It is noticeable that high-rise buildings as typological elements are to be used quite specifically for certain purposes, but their use is by no means primarily determined by conditions of profit-making. Rather, it presupposes diverse processes of social change since the middle of the 20th century and is based on a stable professional-political discourse conducted by architects and urban planners significantly co-determining urban design governance (see also Charney et al., 2021). It has become effective in the development of brownfield sites and increasingly for urban expansion projects again. Interestingly, in this context, the spatial distribution of high-rise buildings and their role in urban design seems under-researched (Drozdz et al., 2018; Eizenberg et al., 2019; Frenkel, 2007).

The article aims to explain how the changed role of residential high-rise buildings after the massive critique of modernist high-rise housing has been taken up by planning and urban design. After tracing the gradual spread of high-rise residential buildings in the second half of the 20th century in Germany and introducing ongoing debates, it explains how major German cities manage the current trend and try to sensibly integrate high-rise both in informal strategic planning and project development. The focus is, therefore, not on the potential impact of a gradual verticalization, often discussed internationally, but on strategies used for its implementation. The main arguments of the article are: (a) The "post-modern rebirth" of residential high-rise buildings is strongly dependent on project-based decisions and only hesitantly uses strategic planning to direct development, and (b) the implementation of high-rise housing requires an exploitation of opportunities that can be legitimized as most compatible in terms of urban design in their mostly "horizontal" urban environments.

The article builds on three research projects on recent urban design innovations and participation that have studied new housing developments in the 50 largest German cities since the financial crisis (Altrock, 2022a; Bertram & Altrock, 2021; vhw, 2018). The results were complemented by a survey of architectural and planning publications on the studied cities, council information and process representations of the cities, competition documents, and stated aims of designers and investors to identify the major urban design strategies that are currently applied when identifying sites and trying to regulate high-rise development.

2. High-Rise Residential Buildings in Germany: A Brief Overview of the Scholarly and Societal Debate

In contrast to the situation in Asia, for example (cf. Yuan & Yeh, 2011; representative of many similar works), high-rise construction in Germany has only recently been the subject of limited academic research (cf. Gibson, 1994). Interestingly, the literature on growth politics in German cities also rarely refers to the role of high-rise buildings (for Berlin, see Altrock, 2003; Colomb, 2013; Lehrer, 2002; Strom & Mayer, 1998). This can probably be attributed to the specific economic development in Germany with a delayed financialization in the international context and an enormously increased pressure on inner-city real estate markets since the global financial crisis (Dörry & Handke, 2012; Schipper & Wiegand, 2015; Wijburg & Aalbers, 2017; see also Brake & Herfert, 2012). With regard to life in residential high-rise buildings, sociological studies played a significant role early on in the critique of modern housing developments (for an overview, see Herlyn, 1970; Zupan, 2021). It was only in the wake of Frankfurt's emergence in the 1990s of a skyline of high-rise office buildings, however, that interest in sociological, economic, and political science studies of high-rise housing in Germany resumed overall after the gradual demise in the 1970s as reflected in a comprehensive yet largely historic anthology (Rodenstein, 2000a). The critical assessments of high-rise residential buildings expressed in the early works are repeatedly taken up in architectural criticism (for example, Jonak, 2001/2018). However, they give way in the face of more detailed studies of residential satisfaction and renewed appreciation (Kabisch et al., 2022; van Damme et al., 2021; in the international context, see Althaus, 2018; Dorignon & Nethercote, 2021; Kalantari & Shepley, 2021; Lukas, 2007; Power, 1999; Turkington et al., 2004; van Kempen & Musterd, 1991; Wu & Ge, 2020) as well as a recent increase in the construction of high-rise residential buildings in German metropolises against the background of housing market shortages, enormously rising real estate prices, and increasingly spectacular individual projects, a tendentially rather open-minded echo among consumers, in the general press, and in real estate magazines (Baulinks, 2015; Hilgenstock, 2011; Jung, 2016; Kiefer, 2016; "Marktreport: Fast 80 neue Wohnhochhäuser in Deutschland bis 2018," 2016; Zabel, 2020). The main drivers and manifestations are being discussed, but, not infrequently, the focus is on planned projects without following up more closely which of them are realized.

3. Background: High-Rise Buildings in Germany After the Second World War

High-rise buildings were built in several cities starting in the 1920s for private corporate headquarters or public administrations (for the following, see especially Baumeister, 2021; Lange, 2008; Pappe, 2013; Schendel, 2021; Schendel et al., 2018; Weyer, 2020), taking up quite remotely the medieval idea of gender towers that protrude from wider buildings as very slender tower-shaped, less economical components. Only with a delay compared to the US, especially in the dynamically growing capital Berlin, did the first high-rise projects manifest design will and economic potency. The urban-architectural modernism that emerged in the interwar period produced a large number of projects by famous modern architects related to the Bauhaus school. They

remained largely visions but left a lasting mark on the debate about urban planning.

High-rise office buildings appeared only after the Second World War, but also the first high-rise residential buildings, built in green settlements, initially on inner-city sites, mainly in the course of reconstruction. The West Berlin international building exhibition Interbau (1957) can be considered of particular importance for the mainstreaming of this approach. "Post-war modernism" produced a whole series of high-rise buildings in many cities, but this development proceeded quite differently depending on the applicable legal traditions, the extent of destruction in the Second World War and the reconstruction concepts, and ultimately economic potency and housing demand. This can be readily seen in a quantitative compilation of high-rise construction activity (see Figures 1–5). Buildings over 50 m high were the absolute exception before the war, and there were no distinctive city skylines, with the exception of some office high-rises, built until 1975. Only Frankfurt and, to a certain extent, Hamburg were able to distinguish themselves as outstanding locations, while Berlin lacked the economic potency to do so. At that time, high-rise residential buildings were mainly erected in large housing estates, albeit rarely higher than 50 m. Their low numbers can be attributed to prominent locations with height accents. The major exception was Berlin, where considerable heights were achieved in both parts of the city in large housing estates, with an emphasis on standardized point high-rise types in East Berlin.

With the crisis of urban-architectural modernism, the turn to post-modernism, and the economic crises of the 1970s, the picture changed significantly: The construction of high-rise buildings declined dramatically, especially as the construction of large housing estates and social housing came to a close. Two exceptions are notable, however. First, the East German housing program did not really take off until the early 1970s, so a considerable number of high-rises were still being built there in suburban estates until German reunification in 1990. The brief unification-related office high-rise boom collapsed after a short time in an ongoing transformation crisis in Berlin. Second, towards the end of the 1990s, Frankfurt developed into a service metropolis, accompanied by a striking silhouette with buildings over 100 m high.

In the new millennium, a renaissance of high-rise construction is already evident in the quantitative overview, which is still continuing and assuming previously unknown proportions in terms of the height and locations of individual projects. This is represented above all by the numerous non-residential buildings between 50 and 99 m in height, while the smaller number of newly erected residential high-rises points to individual projects completely different from the large-scale residential construction of earlier times and will be examined in more detail below. Those trends are currently ongoing, but it is difficult to trace the number of projects (cf. Reicher & Söfker-Rieniets, 2021; Thiel, in press; Zabel, 2020).

4. Planning and Controlling High-Rise Development in German Metropolises in the 21st Century

The previous section indicated that the number of high-rise projects in Germany's largest cities has increased recently. This is due to a confluence of certain socio-cultural, economic, and political conditions. In recent decades, for example, extensive economic and

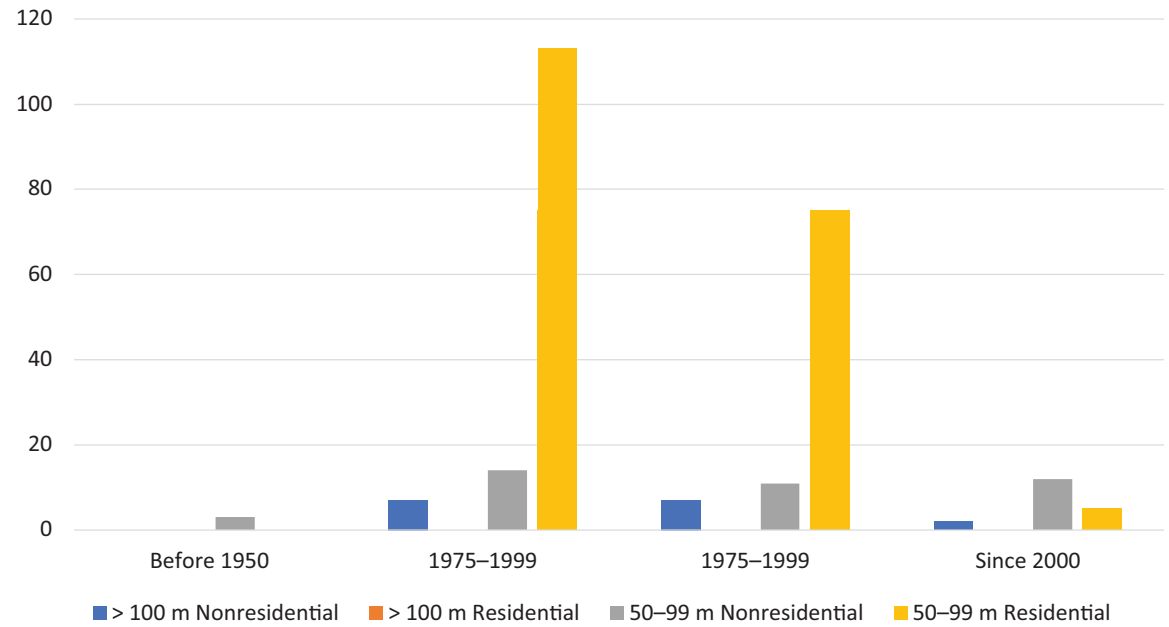

Figure 1. Construction of tall buildings (50 m and above) in Berlin. Sources: Author's work based on personal observations, Hilgenstock (2011), Wikipedia (2022a), and Zabel (2020).

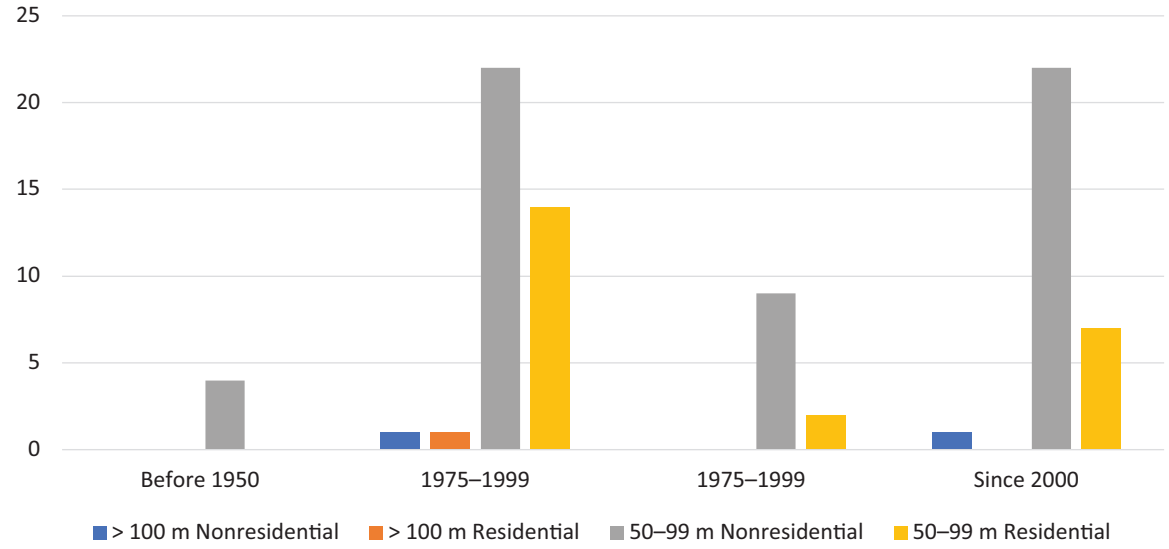

Figure 2. Construction of tall buildings (50 m and above) in Hamburg. Sources: Author's work based on personal observations, Hamburg (2022), Hilgenstock (2011), Wikipedia (2022b), and Zabel (2020).

infrastructural transformations have offered excellently located inner-city brownfield sites available for reuse. With an increase in the importance of metropolises and especially their inner cities, a large number of inner development projects for housing, tertiary uses (offices, hotels, retail), and culture were planned and realized. Both because of ongoing criticism of the landscape-oriented urbanism of the modern era and with the intention of limiting the use of "greenfield" sites for ecological reasons, higher urban densities have been accepted and translated into German planning law.

Site development dynamics and planning approaches of cities in dealing with the renewed demand for high-rise buildings differ significantly. Essential to this are path dependencies: firstly, the urban development pattern in post-war modernism resulting from the degree of war destruction and the type of reconstruction in relation to the partially preserved historic core with its traditional high-rise dominants; secondly, the local role of the service economy and the resulting demand for offices and hotels; and finally, housing policies of the cities with the respective role of social housing and large housing estates. The resulting approaches to development control, strictly regulated in formal land-use planning and requiring specific justification to allow for high-rise buildings at all, are roughly outlined in the following. They build on a literature review of the development until 2000 and an analysis of the newer plans and ongoing planning activities. The latter will look at how the cities consider architectural and urban design quality, determine locations and functions, and optimize decision-making (see also Table 1).

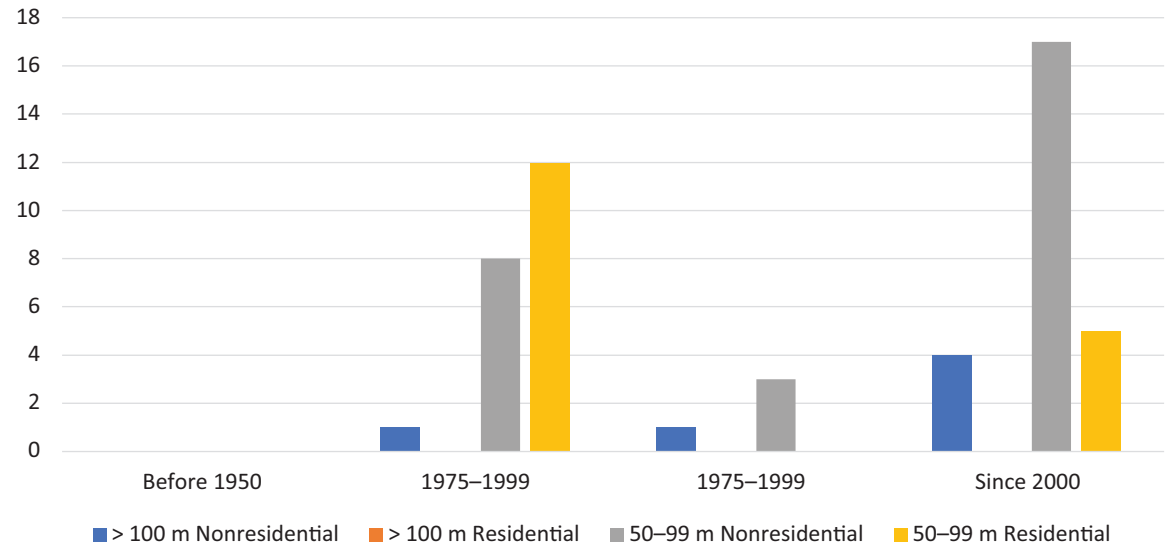

Figure 3. Construction of tall buildings (50 m and above) in Munich. Sources: Author's work based on personal observations, Hilgenstock (2011), Stadt München (2022), Wikipedia (2022c), and Zabel (2020).

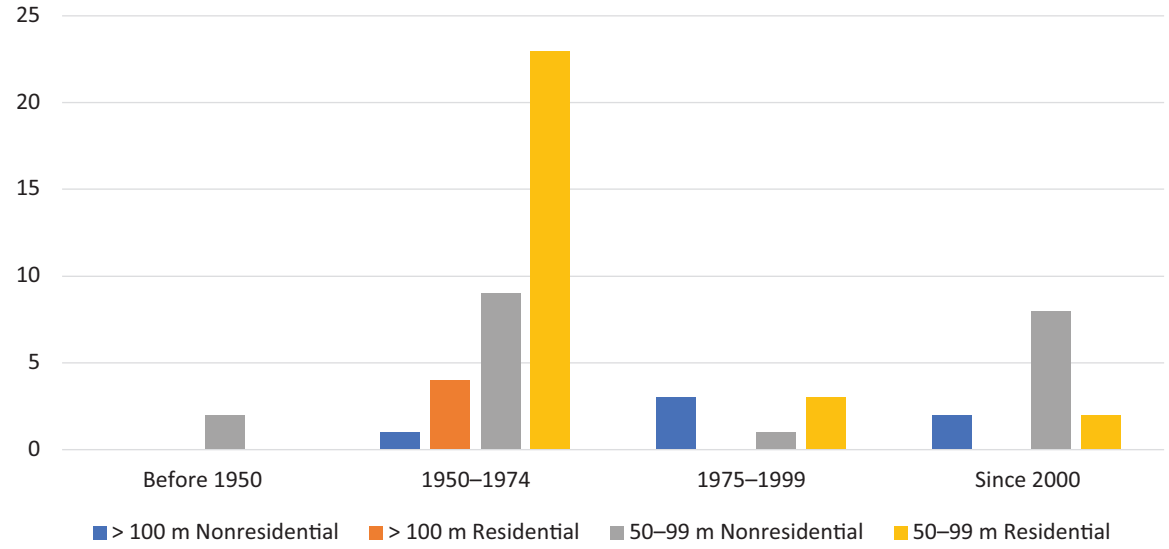

Figure 4. Construction of tall buildings (50 m and above) in Cologne. Sources: Author's work based on personal observations, Hilgenstock (2011), Wikipedia (2022d), and Zabel (2020).

Berlin must be considered a special case in light of its division in the second half of the 20th century (for the following, cf. Altrock, 2003; Flagner & Schick, 2017 for more background on Berlin's respective development). The dominant German metropolis before the war, it pioneered modern high-rise construction, but both parts of the divided city lacked the economic dynamism that would have continued this trend. Accordingly, a true high-rise city never emerged. In the capitalist West, a decentralized pattern of smaller high-rise agglomerations in central locations and of selective individual projects, mainly for public users, emerged, complemented in the periphery by high-rises in large housing estates. In the socialist East, large-scale residential construction dominated until the late 1980s, producing a large number of distinctive high-rises in both central and peripheral locations. After reunification, the pattern of central locations in the city reasserted itself against this background. A renewed focus on the former historic center by investors in the 1990s was accompanied by a commitment to the restoration of the traditional urban development pattern, dating back to baroque and historicism, so that a height development above the historic Berlin "eaves height" of 22 m was to be avoided. In addition to the reconstruction of this basic structure, severely challenged by war and division but considered to be identity-defining, the aim was to avoid a one-sided concentration of jobs in the tertiary sector in the inner city and thus an overload of the traffic infrastructure. Accordingly, planning considerations by the city government and local urban designers already developed before the reunification were continued (documented in Berlinische Galerie,

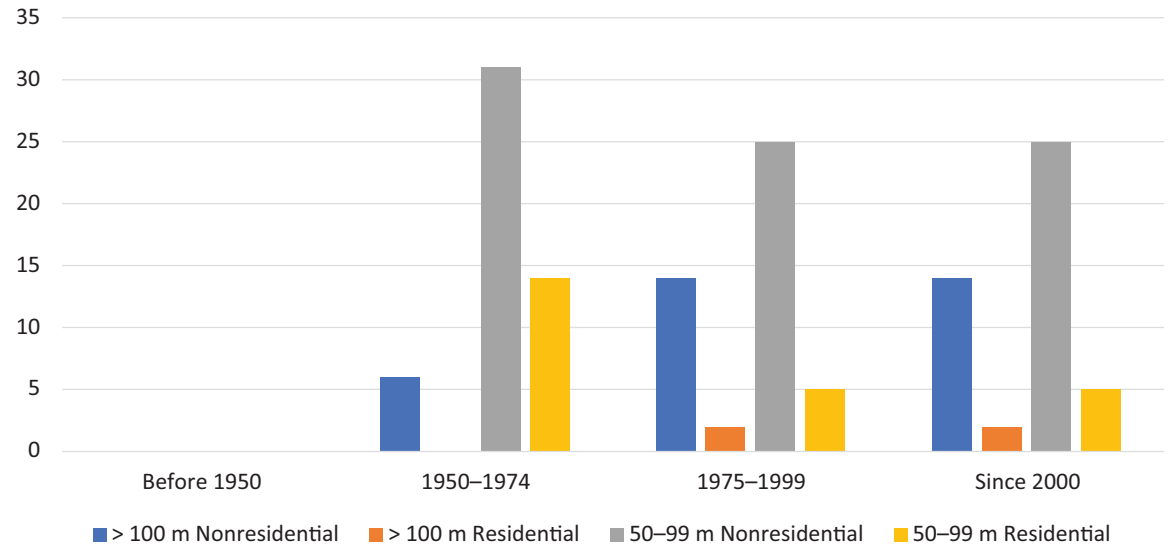

Figure 5. Construction of tall buildings (50 m and above) in Frankfurt. Sources: Author's work based on personal observations, Hilgenstock (2011), Wikipedia (2022e), and Zabel (2020).

1991; Lampugnani & Mönninger, 1991). They were based on permitting high-rise clusters almost exclusively foreseen for office development in three particularly suitable clusters (Breitscheidplatz, Potsdamer Platz, and Alexanderplatz) identified as sites for city development in the era of urban modernism, but otherwise directing high-rise development to well-connected relief locations on the inner S-Bahn ring (Senate Berlin, 1993). In all subsequent changes in urban development policy, this fundamental course has largely been maintained and safeguarded by planning law, complemented by informal urban design plans for the inner city (*Planwerk Innenstadt*; see Senate Berlin, 1999), individual competitions for key sites, and design committee (*Baukollegium*) recommendations. In the 2000s, less attractive residential towers in East Berlin's large housing estates were even demolished to reduce the vacancy rate in large East German housing estates. These sites later became the subject of new high-rise residential construction again when demand for housing surged in the 2010s. After demand for high-rise buildings took off then, a high-rise mission statement was conceived after a lengthy debate starting in 2017 and finally adopted in 2020 (Senate Berlin, 2020). For the first time, it formulates a set of informal planning principles that can serve as guidance for the legal justification of high-rise buildings. Such justification is required under German planning law when certain maximum density values are exceeded. The principles are also intended to strengthen living in the inner city. They call for a high-quality of site selection, architecture, urban design, open space and transport connection, sustainability, multifunctionality, and planning process. However, as it explicitly excludes strict criteria for site selection, it leaves future decisions open to project-related debates (see also the case studies that already reflect this approach).

In Hamburg, as in Berlin, the transformation of the inner city into a city dominated by high-rises failed to materialize despite considerable war damage, as the inner-city churches were still considered to be the dominant vertical accents (see Schubert, 2000). The multifunctional city center, largely determined by tertiary uses (administration, retail, hotels, culture), was thus rebuilt with only a few high-rise dominants. The demand for private corporate headquarters was directed early on (to relieve the inner city and mixed residential quarters) into the comparatively peripherally located City Nord, where its isolated height dominants did not affect the neighborhood. The quarter, later criticized for its monofunctional urban design, lived up to its purpose in that it accounted for almost 30,000 office jobs by the mid-1970s and, after an intermittent loss of importance, remains an important workplace location to this day. In addition, City Süd, located to the east of the city center, later became another relief location for the city center. Although the city focused on principles for its cityscape in the context of its strategic urban development plan, high-rise development was explicitly excluded there, on the understanding that individual projects might be implemented outside the rebuilt historic core or at significant entrances to the city without affecting key vistas (FHH Hamburg, 1996, 2007, 2014). Besides, other selective high-rise projects and peripheral large housing estates with striking high-rise accents were built, but, as elsewhere, they came under criticism for their modernist urban design. Particularly with the conversion of abandoned port facilities directly south of the city center into the so-called Hafen-City, one of Europe's largest multifunctional urban developments for up to 45,000 office jobs and about 15,000 residents, which began in the 1990s, the city has now been trying for several decades to channel its growth dynamics close to the city center in a more mixed-use approach (Bruns-Berentelg et al., 2022; Flagner & Schick, 2017). Here, as on other inner-city conversion sites, competitions are being held to develop an effective small-scale urban configuration highlighted by iconic high-rise accents in selected locations. In contrast, there is intentionally no effective high-rise concept for the city as a whole.

Until a few years ago, high-rises played a minor role in Munich. Although the city has experienced an enormous and ongoing economic upswing since the Second World War, this was based only to a lesser extent on outstanding companies in the service sector. As a result, striking high-rises were only erected at isolated locations as corporate headquarters (Hoffmann, 2000). The large housing estates that were also built on the outskirts played a role in the cityscape, especially in connection with the preparations for the 1972 Summer Olympics but remained limited to a few selected locations. For vertical urban development, the orientation towards historic high points was central until recently, following two high-rise studies commissioned by the city in 1977 and 1995 that gave priority to the protection of the historic cityscape over being superimposed by high-rise buildings and defined a large part of the city as a protection zone for this purpose. Besides, the 1995 study identified areas suitable for further densification, but proposed no instruments for control that went beyond the usual planning law (Stadt München, 2022; Schreiber, 1977, 1995). Thus, high-rises were not to exceed the height of the city's landmark, the twin towers of the Frauenkirche. To reinforce this, a referendum was brought about in 2004, strengthening the local consensus laid down informally thereafter in a series of debates among experts and politicians (Baumeister, 2005). Only in the last few years, extensive inner-city brownfield development next to railroad facilities and the formulation of a northeastern city entrance along an important development axis have defined stronger high-rise accents largely on a project basis.

After destruction in the Second World War and modern reconstruction, the city of Cologne had already become the scene of a deliberate framing of the old town, characterized by its medieval church towers and high-rises with various functions along the historic

ramparts and along outward roads (Precht von Taboritzki, 2000). Although these high-rises are unmistakably "modernist" due to their striking architectural form and their inadequate urban integration into their vicinity, they have given the city an unmistakable skyline. Beyond them, high-rise residential buildings have been built primarily in peripheral large-scale modernist housing estates. In the 1990s, in response to criticism of individual high-rise projects, considerations were given to a high-rise concept, which was drawn up by the city planning office and discussed in several stages up to 2,000 in several variants. The aim was to keep the visual links to the cathedral free and to ensure good traffic connections for high-rise buildings so that intersections between radial and ring roads and areas on the eastern waterfront were discussed. The plan was never adopted, though. In recent years, the development dynamic that has spread to brownfields and former commercial areas has brought about individual high-rises near the banks of the Rhine, but further-reaching plans in this regard have come into conflict with the 1996 entry of Cologne Cathedral on the UNESCO World Heritage List because of the competition with the historic silhouette (Flagner & Schick, 2017; Michel, 2005). Efforts to systematize infill development around the inner city, still characterized by the very open urban landscape of post-war reconstruction, have identified a variety of potentials for further redensification, which are to be developed more in line with traditional urban planning models and high-rises as individual accents (Unternehmer für die Region Köln & AS+P, 2008), and no specific high-rise plan has been adopted so far.

Like no other city in Germany, Frankfurt am Main has developed into an outstanding financial metropolis with a distinctive silhouette only gradually after the Second World War. The city government, focusing on the tradition of the city as a commercial center, favorably gave permissions for moderate high-rises from the 1950s onwards, proposing sites around the old town in the first high-rise plan published in 1953 (Müller-Raemisch, 1996; Rodenstein, 2000b). When the city gradually became the German banking capital, additional high-rise buildings were to be concentrated in the historic Westend villa district, roughly west of the old town, in the 1960s, which led to fierce resistance in the local population. Besides, it developed a relief location between the city center and the airport in the Niederrad district. Because of the considerable impact on urban development, the city set up a number of plans that attempted to channel high-rise office buildings along main outward roads (*Fingerplan*, 1968) and in cluster form in an area west of the historic old town that became the nucleus of the subsequent skyline (*Bankenplan*, 1970). When the demand for office space increased further, additional high-rise buildings were to be concentrated along the outward road of Mainzer Landstraße (*City Leitplan*, 1983; see Speer & Praeckel, 1984). With the settlement of the European Central Bank in 1999, the new demand was to be channeled with the help of another plan, consolidating and complementing the skyline that had developed (*Hochhausentwicklungsplan*, 2000, see Jourdan & Müller PAS, 1998; Stadt Frankfurt, 2008). It was the first plan that foresaw residential uses in the high-rises. Not only was the height limit increased further, but by making use of extensive former railroad areas, the area for high-rises expanded considerably thereafter. Development is now to be controlled by means of the amended high-rise master plan from 2000–2008—not always successfully, though (Flagner & Schick, 2017). Recently, however, the market situation has changed considerably: Vacancies of office space contrasted with a very tight residential market, so that both conversions from office to residential high-rises and the construction of extremely high-priced residential high-rises can be observed. The city is currently still working on yet another Hochhausentwicklungsplan 2021, a commission awarded to a team of three consultants proposing stronger mixed-use but obviously trying to avoid future residential high-rises as the existing ones have high vacancy rates (Baier, 2022; Skyline Atlas, 2022; Stadt Frankfurt, 2022).

While strategic development plans integrating the idea of "building culture" have increasingly addressed issues of the cityscape and thereby occasionally produced localized guidelines for high-rise buildings (Hackenberg et al., 2010), the overview makes clear that the cities intentionally pursue completely different approaches: While Frankfurt has long tried to regulate high-rise development in master plans, Hamburg and Munich followed simple general principles but have nevertheless seen a number of controversial project-related decisions that have ultimately led them to make commitments to their long-standing principles. Cologne has often aimed at regulating development more clearly, but never really succeeded in setting up a consistent strategy. Berlin, referring to the difficulties of other cities implementing strict principles, relies on an all-encompassing set of quality criteria but formulates them only as a very soft orientation. The most stunning observation concerns the ways the cities deal with site selection: While all the cities pursue common general principles, only Frankfurt regularly identifies preferential locations—a strategy Berlin and Munich also pursued for a time. The increasing demand for residential high-rises has not led to serious efforts in setting up principles for them anywhere.

5. Residential High-Rises: A Post-Modern Rebirth?

When turning to high-rise residential buildings now, it is important to reflect professional discourses by architects and urban planners over longer periods of time. They have aimed at a "reconciliation" between modern and post-modern urban design principles at several levels (Altrock, in press; Schenk, 2017; Schipper & Wiegand, 2015). Essential qualities of modernism are

Table 1. Approaches to informal planning for high-rises in five German cities.

	Informal plans		Project-related principles and requirements				Role of residential high-rises
Features	Tradition after the Second World War	Current state	Site selection	Integration	Architecture	Decision-making	
Berlin	First orientational plans in 1980s	Plan adopted in 2020	Key locations	Transport nodes, quality of open space	General call for quality, energy-saving	Competitions, design committee	Not explicitly covered
Hamburg	No plan	No plan	(Key locations along the waterfront)	(Transport nodes)	(Preference for star architecture)	(Competitions)	(Not explicitly covered)
Munich	Series of high-rise studies	Referendum 2004	Preference for ring roads and peripheral key areas	Preference for transport nodes, (quality of open space)	Height restriction, (general call for quality)		Not explicitly covered
Cologne	Several orientational plans, not adopted	No plan	(Preference for ring and outward roads and waterfront)	(Preference for transport nodes)			(Not explicitly covered)
Frankfurt	Long series of plans	In preparation	Central clusters and key locations mix	Consolidation of clusters, functional	Extreme heights to develop skyline, energy saving	Competitions	Selected locations recommended discussed skeptically

Note: All cities have traditionally built on the principle of protecting the historic cityscape and have a considerable stock of residential high-rises in large housing estates, which is not mentioned in the table; principles that can be loosely identified where no plan is adopted are in parentheses.

seen in potentially high residential densities despite the availability of green spaces, especially when making use of new technological possibilities allowing for larger window openings and, thereby, ultimately greater building depths. Attempts to rehabilitate high-rise residential buildings are based on the now widely shared assessment that the negative stigmatization of modern large housing estates is not primarily attributable to the inhumane scale of high-rise residential buildings. Rather, it is seen as the result of a one-sided social housing-related occupancy policy. With changing household structures and urban lifestyles, a renewed demand for well-designed and equipped residential high-rises is postulated (and evidenced in some of the individual projects presented below). Additionally, far-reaching attempts to rehabilitate brutalist architecture have recently found favor in the architectural debate, which has contributed to reevaluating modernist large housing estates (Elser et al., 2017; Harnack, 2014). Their renewed recognition is coupled with more far-reaching approaches for a careful treatment of testimonies of brutalism, such as careful urban regeneration, a stronger orientation towards preserving the gray energy stored in existing buildings, and probably ultimately also a post-modern trend towards stylizing brutalist buildings as vintage fashion.

Together, the above-mentioned debates have led to a situation in which high-rise residential buildings can once again be counted as part of the legitimate repertoire of urban design, and not only in the context of luxury projects on unleashed real estate markets such as in the center of Frankfurt or Berlin, where they had come under massive criticism in the late 20th century. So far, there are indications that they are now also being used again in large housing estates planned on the outskirts of swarm cities, where central areas are highlighted with height accents visible from afar, and a variety of

housing options is propagated, seeking to take advantage of opportunities for living on the edge with excellent views into the countryside.

Against the background of weak master planning, it is interesting to analyze the key features of individual projects that are realized. As a number of projects is currently under discussion in the cities with uncertain outcomes, the following section will limit itself to a tentative typology of approaches that may have to be revised in the future. It is based on a set of observations and interpretations drawn from the projects compiled for Section 3 (see references there), but it has not been possible to present a complete list here. For the compilation, city government websites and architectural yearbooks (Hamburgische Architektenkammer, 1989–2022) were additionally scanned.

Due to length restrictions, this section will have to set a strong focus on how sites are selected and the role urban design principles play in this respect. For this purpose, the appearances of high-rise buildings in the context of housing are categorized according to their spatial context. The first two concern entire neighborhoods, while the latter looks at a variety of approaches towards realizing individual or small groups of residential high-rises: (a) new neighborhoods on redevelopment sites, (b) further development of city clusters, and (c) "reuses" of buildings and sites.

5.1. New Neighborhoods on Redevelopment Sites: "Hybrid" Ensemble Urbanism in the Making

With a gradual shift towards "reurbanization" (Brake & Herfert, 2012) in the 1990s, the question of appropriate urban development concepts for inner city areas was frequently raised. Higher densities than in the modern era almost universally prevailed, which were considered plausible by the cities for the reuse of brownfields: There were hardly any serious conflicts with neighbors to worry about, as compared to denser development on the urban fringe adjacent to single-family neighborhoods. As land for reuse is costly, private investors were allowed higher densities to make development profitable in the first place. Motivated by criticism of modernist urbanism, inner-city locations, in particular, should allow for greater urban diversity through denser neighborhoods. More "urban" neighborhoods were popular with a demand by younger singles and couples.

In brownfield redevelopment, however, it was not only a higher density that prevailed. In addition, individual height accents were often combined with perimeter block concepts to create an address and to give the respective neighborhood a certain distinctiveness. Particularly in competition procedures, urban planning models that propagated a combination of uniform height development and emphasis on a literally outstanding individual building as an eye-catcher were repeatedly met with approval by architects and urban planners, members of juries themselves trained in urban design, and private developers interested in presentable marketing features.

This philosophy of a combination is applied in functionally mixed sites also in order to generate greater urban diversity (see Figures 6a and 6b in the Supplementary File). Larger inner-city residential neighborhoods—typically in attractive waterfront locations—are classically "crowned" by a single high-rise office or hotel building. The redevelopment of Frankfurt's Westhafen port from the 1990s onward probably represents the first well-known example here (Wentz, 2022), followed by projects such as Dahlmannkai, well-known internationally as the first phase of HafenCity in Hamburg, and Main Plaza on Deutschherrnufer in Frankfurt (2001).

Interestingly, similar cases can be found in which the marketability of high-rise residential buildings is cautiously explored for the first time when they are not built within the framework of social housing. From today's perspective, however, these are still far from the luxury of projects that are currently being planned in many places (see Figures 7a and 7b in the Supplementary File). Starting in the late 1990s, Theresienhöhe residential quarter was developed on the abandoned inner-city trade fair grounds in Munich according to a design by Otto Steidle (Haberlik, 2004). Its striking Park Plaza building uses balconies sculpturally for the facade design. Starting in 2000, the much smaller Falkenried Quarter was built on the site of an abandoned tram depot in Hamburg (Meyhöfer, 2005). It combines a number of different structures for various types of housing. The special eye-catcher is a studio residential tower by Bolles and Wilson, emphasizing an urban articulation point. Similar approaches are being pursued in other cities.

5.2. Further Development of City Clusters: Attempts at Functional Enrichment

Traditionally, in service metropolises, in addition to the city proper, new subcenters are often developed, which, because of their less central location, must be made attractive at great expense. This includes, among other things, the symbolic charging with urban development highlights, which also include elaborately staged high-rise clusters. In Europe, London Docklands and La Défense in Paris are probably the most important examples of those strategies and their challenges.

In view of the recent dramatic rise in real estate prices, new secondary centers with complex office, hotel, retail, and residential uses are also being realized in outstanding locations (see Figures 8a–8e in the Supplementary File). They have been occasionally planned on conversion sites like the projects discussed above, but due to their favorable location near high-ranking transportation hubs or existing central business districts, a set of high-rise buildings is accentuating the site. Attempts to create more functionally mixed areas and the current demand for high-rise luxury living have now made them into favorable locations for residential high-rises.

A first example is the Bavaria Quarter in Hamburg, completed in 2008 following a 2002 competition by various internationally renowned architects. There, a deliberate framing of the redevelopment site with several high-rise buildings of different uses reflects the idea of shaping outstanding inner-city sites that allow for architectural diversity in increasing competition among cities (Rauterberg, 2008).

An urban planning competition held in the early 1990s for the area of urban devastation near the Berlin Wall had concluded that accents with a maximum height of 60 m should only be possible at prominent points on the banks of the Spree River, but that the area should otherwise be rebuilt in line with the usual eaves' height in Berlin (Altrock, 2003). Construction activity only got off the ground in very few places after the end of a serious local economic crisis. Throughout a series of planning exercises for smaller sub-areas, designers were able to successfully place arguments for the need for further urban accents (Bezirksamt Friedrichshain-Kreuzberg von Berlin, 2004). Concepts for subareas reflect the individual considerations for height accents that were discussed at different points in time. In that context, an urban design concept by Hemprich and Tophof architects for the redevelopment of a former railyard foresaw the framing of a newly built area of perimeter blocks around a convention center by high-rise buildings that are currently being realized. The twin residential towers called "Upside Berlin" by the local architect Tobias Noefer clearly reflect the trend towards luxification. Despite their difficult location in a densely packed office cluster, the site is justified as a contribution to enriching the functional mix in the area.

In Frankfurt, the Skyline-Plaza, implemented after complicated negotiations with city politicians as the eastern prelude to Europaviertel, an extensive urban redevelopment area on former railroad tracks, now complements Frankfurt's central business district (Altrock, in press). The complex includes the (180 m high) Grand Tower, completed in 2020 according to the 2014 competition-winning design by Magnus Kaminiarz & Cie, and the Grand Central, two of the tallest high-rise residential buildings in Germany.

The idea of functionally complementing city clusters with residential uses has occasionally also produced mixed-use high-rise buildings (Merkel, 2018; Thiel & Mach, 2020). Several floors of hotels or office high-rises are reserved for luxury apartments, thus meeting a high-priced residential demand or combined with office and hotel floors. So far, mixed-use high-rises have been found mainly in Frankfurt as spectacular designs (e.g., Omniturm/Bjarke Ingels, One Forty West/Cyrus Moser).

5.3. Reuses of Buildings and Sites: Rare Opportunities to Cater for a Variety of Housing Demands

When it comes to planning individual residential towers, it is difficult to find appropriate sites in low-rise inner cities and to justify height accents. Therefore, the reuse or transformation of existing buildings can act as a welcome opportunity to realize luxury housing to diversify the functional structure of less significant monofunctional service centers with decreasing demand for office space (see Figures 9a, 9b, and 9c in the Supplementary File). Frankfurt-Niederrad, now marketed as "Lyoner Quartier," serves as an example. As a first step, the vacant Lyoner Straße 19-office tower was converted into luxury apartments with three additional floors in 2010 by architect Stefan Forster, to be followed by additional projects. As rents in the office market are usually much higher than in the residential market, such a strategy is only realistic if it targets the top end of the market. Not far away, the Henninger Turm in the south of Frankfurt, once built as a landmark brewery tower, was to be demolished, but its strong iconic architecture was ultimately used to develop a project for luxury apartments strongly resembling it, designed by Meixner Schlüter Wendt and completed in 2017, in a low-rise neighborhood where a new tower would hardly have found political support.

In East Germany, where large-scale demolitions were carried out to stabilize the housing market in times of shrinking populations in East German cities with help of the Stadtumbau Ost (Urban Redevelopment East) funding scheme, this involved particularly point high-rises and 11 to 16-story row buildings that were no longer marketable. At least in recovering cities with tight housing markets like Berlin and Leipzig, both individual projects with striking point high-rise buildings and smaller clusters with the particularly deep buildings mentioned above are now being built on demolition sites (Howoge, 2022; see Figure 10 in the Supplementary File). Sites can be justified as the original buildings had also been high-rises (Altrock, 2022b).

The preceding examples show that, especially where high-rises have already been developed in the surrounding area before, new additions can be justified in the planning process if they have tied in with their environment in terms of urban development. In the context of incrementally redeveloped brownfield sites, this is of crucial importance. By placing stand-alone residential high-rises in certain locations, it has been possible to address a luxury segment in the market within the framework of the dynamic land price developments observed in recent years, for which hardly any offers had previously been made. This is how, for example, the Living Levels on the Spree near Berlin's Ostbahnhof, designed by nps Tchoban Voss and completed in 2015, came into being (see Figure 11 in the Supplementary File). It uses a spectacular architectural design and an outstanding location in the city with panoramic views as distinctive features for marketing purposes, in addition to luxurious amenities.

6. Discussion and Conclusions

The analysis shows that the debate about high-rise buildings as design instruments, on the one hand, and

possibilities for self-expression and maximization of land utilization, on the other hand, never completely disappeared, even in Germany, which was skeptical about high-rise buildings and rather characterized by horizontally organized cities. After the earlier sharp turnaround in urban design with the demise of large-scale housing, social transformations with changing lifestyles, household structures, and a positive reassessment of "urban" living created the conditions for rehabilitation of high-rise living. However, this could only succeed much later through a conscious departure from the building type as part of social housing and with the development of affluent user strata. However, the foundation for this was by no means laid primarily by developers. Rather, it was dependent on a variety of preconditions. These included, first of all, the departure from the legally established low-density ceilings of the modernist era, which prepared the ground for a new "urbanity." Secondly, it was the architects who persistently explored new possibilities for setting urban accents, believing in the urban qualities of high-rise buildings in the sense of modernism beyond social housing. Furthermore, technological changes contributed to the fact that the luxurious impression of high-rise apartments could be realized at all. The formation of the residential high-rise as a brand with special possibilities for distinction, which addressed a globalized clientele, was ultimately only able to assert itself with the economic transformation after the global financial crisis. And finally, the unleashed real estate market and the housing shortage in the large metropolises were decisive factors. The boom that can currently be observed is reflected in numerous spectacular individual inner-city projects but also in many varieties of "hybrid" urban development on redevelopment sites and even on the outskirts of cities, which aims to combine the urban development qualities of modernism and post-modernism in a targeted manner. Crucially, the definition of the sites takes place at three spatial levels. Attempts to regulate high-rise development in informal city-wide plans are met with skepticism or obstacles with the exception of Frankfurt and, therefore, only provide some general orientation. The main urban design efforts are made at the neighborhood level, where "hybrid" forms are to merge qualities of the high-rise building and the perimeter block, and office clusters are to be functionally enriched even by residential high-rises. At the level of an individual plot, various opportunities are taken up to reuse or reinterpret former sites of high-rise buildings for residential high-rises. In this sense, Germany is still a long way from the high-rise developments of other countries and will probably be able to use high-rise buildings in a targeted manner in terms of design. However, incremental and poorly controlled developments show that this does not guarantee coherent urban development of larger neighborhoods in the long run.

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Conflict of Interests

The author declares no conflict of interests.

Supplementary Material

Supplementary material for this article is available online in the format provided by the author (unedited).

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Article

"Double Ageing" in the High-Rise Residential Buildings of Tokyo

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Abstract
This study aims to explore the current "double ageing" (demographic ageing of residents and physical ageing of facilities) in high-rise (over 20 stories by the Japanese Government's definition) residential buildings in Tokyo, where the rate of ageing has increased most rapidly since the late 1990s, compared to those of other cities and high-rise residential buildings worldwide. First, the trend of demographic ageing in the districts where high-rise residential buildings are concentrated is analysed. The results show that demographic ageing in high-rise residential buildings is faster than in other residential buildings because the age group of the residents is concentrated across two generations: the generation born in 1946–1955 and the generation born in 1966–75. Second, the relationship between demographic and physical ageing was examined through an online survey of 978 residents of high-rise residential buildings conducted in January 2021. A generation gap in values regarding their high-rise residential buildings was clearly identified. Third, the cause and result of the generation concentration and gap were investigated via an interview survey of 26 informants extracted from the online survey. Three main findings emerged: (a) the ageing of the generation born in 1946–1955 has given rise to housing insecurity because of the decline in income, (b) the high rate of singles within the generation born in 1966–1975 may be as a result of housing insecurity after their retirement, and (c) the introduction of social distancing has accelerated the substantial "ageing" of relatively good facilities, but a straightforward generational conflict was not fully deciphered in this article because of lifestyle diversification over generations and organisational culture of management associations.

Keywords
Covid-19; demographic ageing; double ageing; generation gap; high-rise residential buildings; housing insecurity; old-age life transition; ontological security; urban renewal policy

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1. Introduction

As in other countries (Turkington et al., 2004; Yeh & Yuen, 2011), the urban renewal policy in Japan, since around 2000, has led to the construction of high-rise residential buildings in metropolitan areas, particularly in central Tokyo (Hirayama, 2017), where more than 8% of all households are located (Ministry of Internal Affairs and Communications, 2015). In the Japanese sociological field, class segregation (van Ham et al., 2020) has been a major issue (Hashimoto & Asakawa, 2020). However, as Easthope (2019) pointed out, in the later years of condominium development, common challenges and opportunities in condominiums include managing demographically diverse and changing resident and owner profiles and expectations. Yet, a different set of problems can also occur, such as the physical ageing of facilities in high-rise residential buildings and the demographic ageing of their residents.

This "double ageing" is a contemporary event, not a phenomenon set to occur 40 years from now, as indicated by Machimura (2020). As already remarked (Buffel & Phillipson, 2016; Kort, 2021), population ageing and urban change for the development of age-friendly cities, that is, the realisation of "ageing in place" (Somsopon et al., 2022) has become a major issue for public policy around the world. Unlike the discussion on what the city should look like in the future, "double ageing" in

the context of this article focuses on the current and ongoing change in demographic and physical structure in Japanese metropolitan areas where the ageing rate exceeded 20% in 2010, and the subdivision to the general public of high-rise condominiums has prevailed since the end of 1990s due to the urban renewal policy that has dramatically deregulated the restriction of large-scale construction in metropolitan areas in Japan (Sorensen et al., 2009).

In this context, "double ageing" as a concept was presented in Hirai (2017), based on Saito (2016), and focused on the structural dilemma where the management of condominiums by their owners is legislated (Yip & Forrest, 2002). The structural dilemma is that the older the owners or residents get, the greater the range of problems related to the obsolescence of facilities, such as inadequate barrier-free facilities (Amarya et al., 2018), especially because older people are more sensitive to the built environment than other age groups (Ghani et al., 2018). The Japanese legal system, which requires all owners to form a management association and elect its board, means that as owners age and their physical and mental health deteriorate, their ability to serve as board members declines and discussions become inactive, leaving an ever-increasing number of problems unresolved due to the demographic ageing. The term "double ageing" refers to a situation where the resolution is postponed without being addressed and becomes more serious. As a result of these issues not being resolved, the risk of "housing insecurity" (Darab et al., 2017; O'Neil et al., 2020) causing older residents to not continue to live and age in their condominiums needs to be considered. This term is also beginning to be introduced in other countries (Zhang, 2020).

In this study, we focus on high-rise residential buildings, which are considered to have a particularly serious problem of "double ageing" due to the scale and complexity of the structures in the Tokyo metropolitan area where they are concentrated, using three approaches.

First, we confirm the actual state of demographic ageing in metropolitan high-rise residential buildings through the National Survey (2005–2015) to identify the characteristics of demographic ageing of high-rise residential buildings.

Second, we draw issues to be examined from our online survey (942 residents of high-rise buildings and 2,193 residents of other condominiums) in January 2021 to grasp the link between demographic ageing and physical ageing by analysing the generational gap of awareness between high-rise residents on demographic ageing (for example, the "lack of management association board members") and physical ageing (for example, "anxiety over hygiene in the flats").

Third, we analyse our interviews in August (26 residents of high-rise residential buildings) to pursue the link between demographic ageing and physical ageing, as it were, to ponder whether demographic ageing does not provoke any issues besides making it difficult to deal with the problems of physical ageing, whether the working-age residents are irrelevant to those issues or not, and whether the difficulties in dealing with physical ageing is provoked only by demographic ageing or not. In terms of physical ageing, we concurrently pay attention to the impact of the Covid-19 pandemic, which has become more serious since 2020 and has amplified the sensitivities over the physical environment and human relationships within and outside the condominiums (Finlay et al., 2022; Thomas, 2021).

Since the beginning of the Covid-19 pandemic, suburbanisation is progressing in Japan (Fielding & Ishikawa, 2021), and its impact on central Tokyo, where high-rise residential buildings are concentrated, cannot be denied. It is also necessary to consider what impact the increase in unemployment (Blustein et al., 2020) during this period has had on high-rise residents. In addition, housing and living conditions can impact the health of occupants and the spread of Covid-19 (Ismail et al., 2022). Particularly high-rise residential buildings have a higher population density per building area than other types of housing and have more common facilities and services. This is not only in terms of hygiene but also in terms of acoustics and communication facilities due to the penetration of telework.

2. Demographic Ageing in High-Rise Residential Buildings

The "person–environment fit" theory within environmental gerontology suggests that, as we get older, we are at higher risk of suffering from increased impairment and, as such, negatively impacted by our surrounding environment (Lawton, 1982). It, therefore, becomes important to explore ageing person-place relations at both the micro and macro scales (Wahl & Gitlin, 2007). Similar arguments are made in the geographies of ageing literature, where there are calls to undertake more multiscalar inquiries, as well as relational understandings of ageing and place (Skinner et al., 2015). This is important because the immediate neighbourhood becomes a stronger focus of a person's everyday life as they get older (Glass & Balfour, 2003; Kerr et al., 2012), with Yen et al. (2009) stressing the importance of the neighbourhood environment for the health and vitality of older adults. It is also worth noting that research on activity/life spaces highlights the role of an individual's immediate built environment on their overall well-being, arguing that as we age, our living spaces effectively shrink (Rosso et al., 2011). This has implications for older residents living in ageing high-rise neighbourhoods as, over time, these environments become the spatial extent of their regular daily activities.

It is rare for ageing research to differentiate between how old various elements of the built environment are and the age of those living in it. For many cities, the structure of the built environment has changed considerably over recent decades as private property-led regeneration

has been utilised as a means to redevelop urban centres and former industrial lands resulting in thousands of new high-rise developments (Butler, 2007; Pow, 2011). This has been facilitated by a shift from a housing development model predominantly focused on suburban and outer periphery areas toward higher-density private sector residential development located in urban centres (Ford, 1994; Lehrer et al., 2010; Nelson, 2009; Scott, 2011). Over the same period, housing affordability across a range of global cities has sharply declined (Davidson & Lees, 2005). Partly framed as a way to improve housing ownership options and reduce the cost of housing, high-rise neighbourhood development has formed a key strategy for global cities to stimulate investment in urban areas (Harris, 2011). Nethercote (2018) goes further and argues that high-rise development has acted as a form of "vertical spatial fix" through a wider process of global capital circulation in support of labour stimulation and international real estate investment. Typically, these processes are understood to result in the development of high-end high-rise developments geared towards middle-class or elite residents (Brueckner & Rosenthal, 2005; Davidson & Lees, 2005; Graham, 2015; Skaburskis, 2010). What is less understood is how these processes "sit" within existing older high-rise neighbourhoods and the residents who live within them in the context of "double ageing." The case study of Tokyo, Japan, is used to help expand these debates beyond new development processes and ground them within the context of an ageing demographic and a surrounding built environment, as well as frame potential future issues stemming from the recent global rise in private sector-led high-rise development.

Looking at Japan in more detail, the article first establishes the actual situation of demographic ageing in high-rise residential buildings using the National Survey of Japan. Here, we identify sub-regions with a high concentration of super high-rise residential buildings (i.e., those with 20 or more storeys) based on the data prepared by our research team, based on building permit applications to the Tokyo Metropolitan Government.

Results indicated that, in 47 districts, the ratio of high-rise residential buildings is more than 60%. Out of these districts, 31 are in central Tokyo, and 42 are in the five wards of the bay area (Figure 1). The average ageing rate in these districts is only 13.9%. This figure is lower than the metropolitan average of 22.2%. It can therefore be assumed that the ageing of high-rise residential buildings is generally less advanced. However, there are variations by district. In Harumi 5 (2.4%) and Toyosu 6 (3.8%), the ageing rate is below 5%, while in Toyosu 1 (26.7%) and Harumi 3 (25.2%), it is higher than the average of the metropolitan area. The first high-rise buildings in Toyosu 1 and Harumi 3 were completed in 1997 and 2009, respectively. Therefore, it can be assumed that demographic ageing is unique to each high-rise residential building, as opposed to the scheme indicated by Otani (2020), that the ageing of housing complexes progresses over a quarter of a century or more, as the main working-age family members who moved in when construction was completed continue to live and age in their housing complexes. The following section will

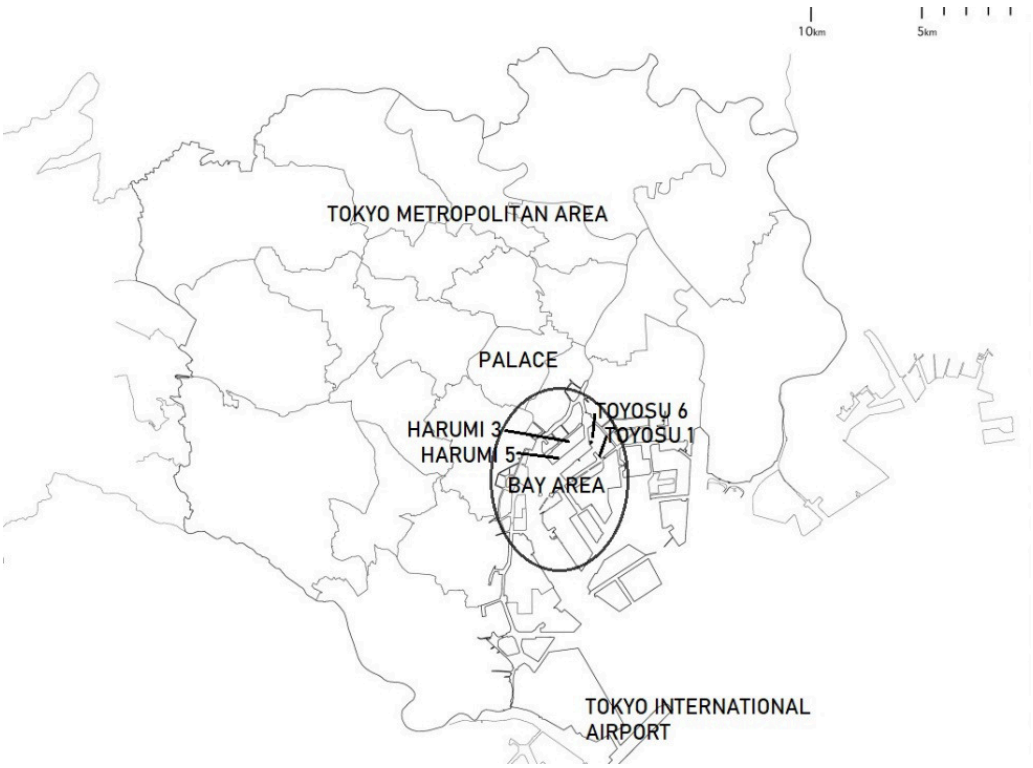

Figure 1. Tokyo Metropolitan Area and bay area.

take Toyosu 1 and Harumi 3 as examples to illustrate the demographic ageing of high-rise residential buildings.

2.1. Districts Where Occupancy Dates Back to the 1990s: Toyosu 1

Toyosu 1 is located at the northern end of the Toyosu area and is closest to the city centre. It was the site of a shipbuilding industrial facility for a long time. The area was redeveloped in the 1990s and is now lined with high-rise office buildings. The first high-rise residential building here was completed in 1997 (one building, 125 units), followed by two more in 2000 (two buildings, 498 units in total) and 2008 (two buildings, 691 units in total). All of these were private-sector housing for sale.

Figure 2 shows the population, by age, of five age groups for Toyosu 1 as of 2005, 2010, and 2015 (all according to a national survey). First, it should be noted that the most common age group, as of 2005, was 55–59 years. This age group was born in 1946–1950. This generation is most numerous in Japan. The second most common age group in 2005 was 35–39 (born in 1966–1970). This generation is about five years older than the second most numerous generation (born 1971–1975). In 2010, the generation born in 1946–1950 was gradually increasing, but the largest number of people was aged 30–34 (born in 1976–1980). This indicates that the main occupants of high-rise residential buildings completed in 2008 are younger than those completed around 2000.

Thus, how did the above generations change in 2015 even though no new subdivisions were taking place? First, the generation born in 1946–1950, which gradually increased in 2010 (60–64 years) and settled in 2015 (65–69 years) at a level slightly below that of 2005, is still one of the most common age groups in 2015. It can be said that the generation born in 1946–1950 continues to live in the area. Concurrently, the slight decline is noted not only because of deaths but also because of possible out-migration. Next, the generation born in 1966–1970, which was the second most common in 2005, was still one of the most common age groups in 2015. It can be said that this generation is also "continuing to live." This generation seems to have reached the same size as the generation born in 1946–1950 when construction was completed in 2008 and can be considered to have continued to live in the area. Finally, the generation born in 1976–1980 decreased by 20% between 2010 and 2015 (35–39 years) and appears to have moved out. The generation born in 1971–1975, five years older than the generation born in 1976–1980, also decreased by 10% over the same period. Thus, it should be noted that in high-rise residential buildings, even in condominiums, the working-age population may not necessarily "continue to live" in the same way as the above-mentioned Otani (2020) revealed in conventional housing complexes.

2.2. Districts Where Occupancy Started in the 2000s or Later: Harumi 3

Harumi 3 had previously been the location of port facilities and public housing complexes, but the redevelopment of the area began in the 2000s. After the completion of public high-rise buildings (267 units) in 2009, two buildings with a total of 1,668 units were built in 2015 as private housing for sale.

Figure 3, like Figure 2, looks at trends by age group in Harumi 3. It does not depict construction completed in 2015. It shows that the public housing completed in 2009 had the largest number of tenants from the group aged 35–39 (born in 1971–1975) in 2010 and those in the age groups five years above and below them each year. At the same time, the generation born in 1946–1950 aged 60–64 was the second most numerous in 2010. Both generations can generally be considered to have continued to live in the area until 2015 (10% of the generation born in 1976–1980 moved out).

The above findings from 2015, for Toyosu 1 (comprising condominiums) and Harumi 3 (comprising public rentals), can be synthesised as follows: First, the generation living in high-rise residential buildings, whether condominiums or rental housing, is divided into two groups. It is difficult to say whether these should be seen as "ages" (in their 30s or around 60 immediately

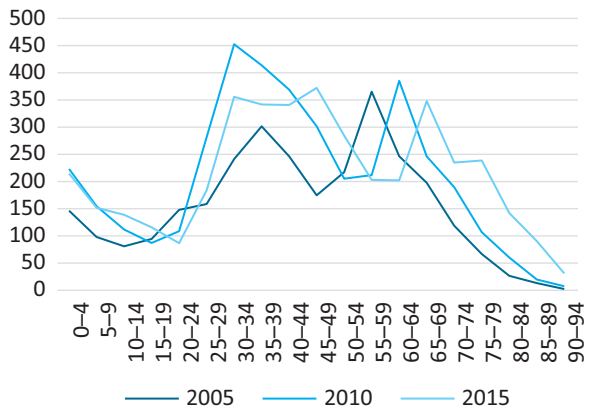

Figure 2. Population by age group in Toyosu 1.

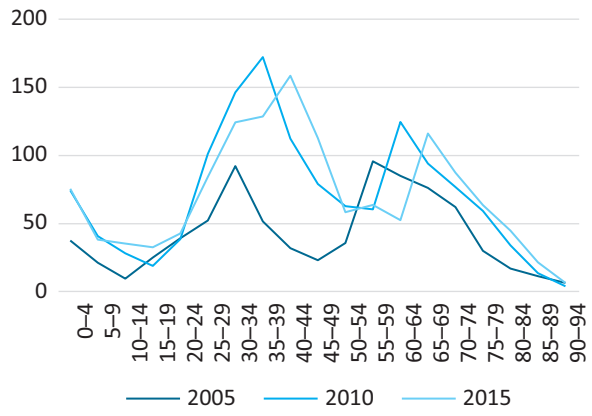

Figure 3. Population by age group in Harumi 3.

after completion of construction) or "generations" (the five age groups above and below the generation born in 1946–1950 and the generation born in 1966–1975).

Even if the ageing rate of residential buildings is not very high, a certain number of older age groups or generations still live there. If the facilities are not adequately prepared for these older people at the time of completion of construction, obsolescence, or physical ageing, a situation where the required functions are not fulfilled in response to changing conditions, is expected to steadily become apparent within 10 to 20 years after construction. Furthermore, the lack of board members of management associations, and the difficulties of discussions due to demographic ageing, will become more complicated. This is because if there are two age or generation groups, differences in interest are likely to become acute in discussions on how to address the obsolescence of facilities and other issues.

3. Double Ageing and Impact of the Covid-19 Pandemic

Our online survey (January 2021) was conducted to clarify how the rapid double ageing in high-rise residential buildings is perceived by residents, together with the impact of the Covid-19 pandemic. The survey was designed by the most popular online survey service company in Japan, its population consisting of residents of housing complexes in the Tokyo Metropolitan Area at the time of response. Data collection was terminated when the number of high-rise residents reached 1,000, and incomplete respondents were removed. First, most of the residents were in their 50s and accounted for 29.1% of high-rise condominiums, while residents in their 30s accounted for 28.8% of high-rise rentals. In other words, compared to the whole housing complex, the distribution of high-rise condominiums is skewed towards older groups, while that of high-rise rentals is skewed towards younger groups. Therefore, rather than simply identifying two age groups, it is necessary to closely examine where the age or generational differences are drawn, paying attention to the completion date and type of ownership in the high-rises.

3.1. Impact of the Covid-19 Pandemic

First, there are non-negligible differences in the Covid-19 pandemic impact according to age, gender, family, and employment type. For example, "income has decreased" was selected by respondents in their 20s (25.9%), themselves and their parents (29.6%), living alone (25.5%), self-employed (35.0%), and part-timers (31.5%) significantly more than other age groups, family, and employment types. Gender differences in terms of employment were evident, for example, in "more telework." In terms of lifestyle, "I spend more time at home" accounted for around 60% of 20–40-year-olds and women, while only around 50% of over 50-year-olds and men. That number exceeded 60% for married couples and "themselves and their children or parents," as well as office-based company employees.

How has this impact affected high-rise residential buildings? The proportion of part-time workers is lower in high-rises (9.6% overall, 6.8% in high-rises), and household income is relatively high (two to four million yen overall, eight to 10 million yen in high-rise condominiums, four to six million yen in high-rise rentals). The Covid-19 pandemic impact is, therefore, also likely to be influenced by age and family type more than by employment status in high-rise residential buildings.

This article primarily focuses on age or generational differences. Looking exclusively at condominium residents, 19.4% of residents who were 50 or younger said that their income had decreased, compared with only 9.2% of residents aged 60 or older. No noticeable difference was found in the living aspect "more time spent at home." On the other hand, while 16.2% of residents in their 20s said they felt their home was smaller, this proportion decreased with age, with only 1.5% of residents aged 60 and over saying the same.

Furthermore, age or generational differences were observed in factors that became more important concerning housing in the wake of the Covid-19 pandemic. While 23.1% of under-50-year-olds cited "advantageous as an asset," only 14.7% of over-60-year-olds did so. In contrast, 12.8% of under-50-year-olds cited "well managed," while 22.3% of over-60-year-olds did so. Of these, "advantageousness as an asset" was not seen to vary significantly between age groups when originally selecting a house but was reemphasised by younger people in the wake of the pandemic. In contrast, "good management" was less important among them when originally selecting a house, and it is thought that the age differences in awareness have widened further since the Covid-19 pandemic.

3.2. Differences in Awareness of Management

We analysed responses relating to increased dissatisfaction with management associations and companies following the Covid-19 pandemic, limited to condominium residents. First, fewer respondents in high-rises (63.8%) than the total (73.0%) indicated that there had been "no particular increase." The most common complaint was "difference in awareness among different generations of owners" (11.9%).

Moreover, the "difference in awareness by generation of ownership" was more than 10 percentage points higher among those in their 20s and 30s (20.8%) than among other age groups. Thus, there were also differences in the awareness gap by age group. In other words, this difference in awareness is more visible among the young but not so clearly among the old.

What specific differences in attitudes can be observed? First, dissatisfaction with the "lack of association board members" was reported by 11.9% of the under-40s, compared to only 4.5% of the over-50s. This

contrast differs from general condominiums, where no age or generation differences can be seen. This phenomenon is thought to be related to the age or generation bifurcation in high-rise residents. In other words, in general, in condominiums where the age or generation of residents is unevenly distributed, the result is that all age groups are equally aware of the situation, whereas, in high-rise residential buildings, where the age or generation is more bifurcated, the dissatisfaction of the working-age residents is more likely to increase.

The second difference in awareness regarding management relates to changes in lifestyle following the Covid-19 pandemic. While only 12.4% of residents aged 50 and younger said they became more concerned about hygiene in their flats, 21.5% of those over-60s said they were more concerned. As mentioned earlier, there was no noticeable difference in "spent more time at home" or in "became more concerned about hygiene in your house." In other words, despite no age or generational differences in changes of lifestyle, the fact that differences were only found in awareness of "being concerned about hygiene in the flat" suggests that there are differences in the original structure of awareness. This difference in awareness was also a characteristic of high-rise residential buildings.

While synthesising the findings, the online survey also showed that the age or generation of high-rise residents is bifurcated, with complex relationships to ownership structure and completion date. Furthermore, in line with this age or generational bifurcation, there was a stronger awareness of differences in age-related attitudes towards management than in the general condominiums. This difference in awareness had a double effect, with the under-30s being particularly aware of this difference.

There were two focal points for this difference in attitudes: First, the sense that board members of management associations are imposing is more apparent among the working age groups. This may be related to the sense of burden among the working age group and the fact that the working age group does not attach as much importance to management. The second is the growing dissatisfaction with sanitation in condominiums among over-60 residents, even though there are no age or generational differences in terms of lifestyle changes. Hygiene in condominiums can be one of the topics of debate in the management of high-rise residential buildings, with relatively more common facilities and services and a higher population density. Specifically, it is the strengthening of hygiene, including social distancing over common facilities and services, which further leads to restrictions on their use. Although this is different from the initially envisaged response to ageing, it can still be seen as a phenomenon analogous to obsolescence or physical ageing.

Generational or age differences also exist in terms of the importance placed on the quality of management after the pandemic. Due, in part, to these differences in awareness, it is likely that differences in awareness and claims by an age group or generation on how overall hygiene should be managed are becoming apparent. The following section analyses the results of interviews with select respondents from the online survey, particularly those living in the bay area, where high-rise residential buildings are more densely located, to explore the reality and background of these differences in attitudes towards management.

4. How is Double Ageing Brought About?

A total of 40 sampled persons, 26 of whom are listed in Table 1 below, participated in the online interview for a maximum of 180 minutes on a 60-minute basis. The interviews were semi-structured, where respondents interacted freely while confirming the content of the questionnaire survey. The following first delves into the differences in attitudes between age or generations and their frictions, particularly in terms of hygiene, suggested by the web survey. It then considers how the age or generational bifurcation of the resident population, on which these assumptions are based, was formed and what the future may hold.

4.1. Manifestation of Age or Generational Differences in Attitudes

When asked about management discomforts, particularly regarding hygiene, an interviewee replied: "Children playing in the flats in the 'stay-homes' policy often damage the walls and sofas. Additionally, there are posters everywhere, which makes the atmosphere bad" (ID8). Although there were only seven interviewees from nuclear families with children, almost all were aware of the presence of families with children. Neither singles nor DINKS interviewees showed any overt statements about avoiding children. However, it was apparent that, subconsciously, they were nervous about the behaviour of children and their reactions to it. It cannot be ruled out that the differences in awareness of hygiene management that emerged in the online survey, as differences between ages or generations, may be because of differences in family types or lifestyles rather than in age or generation.

Complaints arising from these lifestyle differences were shared, including complaints about "sound" due to different waking hours (ID16 and 20). These complaints may also be related to the bifurcation of the type of high-rise residents. The complex combination of age or generation and lifestyle differences exposes common facilities and services to the risk of obsolescence or physical ageing, where they are no longer appropriate for the needs of most residents.

The mechanism for resolving such situations is the management association. The statement of ID1 that he had never paid direct attention to the children was based on the understanding that this should be done through

Table 1. List of interviewees.

ID	District	Age	Family Type	Sex	Class (Class of Spouse)
1	Bay Area	70	D	M	Higher Pro. → Pensioner (Housewife)
2	Bay Area	66	D	F	Housewife (Higher Pro. → Pensioner)
3	Bay Area*	66	D S	F	Small Employer → Casual**
4	Bay Area	64	NF	M	Higher Pro.
5	Bay Area → Bay Area' → Bay Area''*	61	S	F	Higher Pro.
6	Bay Area → Bay Area'	61	NF	F	Higher Pro.
7	Bay Area	60	D	M	Higher Pro.
8	Bay Area	55	S D	M	Higher Pro. → Investor
9	Bay Area	51	S	M	Higher Pro.
10	Bay Area	51	S	M	Higher Pro. (income decrease**)
11	Bay Area	50	D	F	Higher Pro. → Casual** (Higher Pro.)
12	Bay Area → Bay Area''	50	S D	M	Higher Pro. (Casual)
13	Bay Area	50	S	F	Higher Pro. (income decrease**)
14	Not Bay Area*	49	NF S	F	Higher Pro.
15	Not Bay Area → Bay Area *	49	S	F	Emergent Service (income decrease**)
16	Not Bay Area	49	S	M	Higher Pro.
17	Bay Area	49	S	M	Higher Pro.
18	Bay Area	49	S D	M	Higher Pro. (Casual)
19	Bay Area	48	S NF	M	Higher Pro.
20	Not Bay Area	47	S	F	Higher Pro.
21	Not Bay Area*	42	S D	M	Higher Pro. (Casual → Unemployed**)
22	Bay Area → Bay Area' → Bay Area'' → Bay Area'''* → Bay Area'''' → Bay Area''''	44	S D	M	Higher Pro. (Higher Pro.)
23	Bay Area	39	NF NF	F	Higher Pro. (Higher Pro.)
24	Bay Area	34	S	M	Higher Pro.
25	Bay Area	23	NF	M	Intermediate (Parents: Higher Pro.)
26	Bay Area*	23	NF	F	Graduate Student (Parents: Higher Pro.)

Notes: * Rental; ** impact of the Covid-19 pandemic; districts connected by " " are for migration between high-rise neighbourhoods; in the family types, "D" for double income, no kids (DINKS), "S" for single, and "NF" for nuclear family means; in the class, "Higher Pro." means higher professional and managerial occupation, "Casual" means casual worker, and "Emergent Service" means emergent service sector.

the management association rather than between the parties concerned, and this was generally recognised by the interviewees (ID10 and 16).

However, it was not fully understood how the management associations were solving their problems until they had experienced being a board member (ID4, 9, 13, 16, and 20). Conversely, once they had had the experience, it was also recognised that discussions there did not always proceed smoothly. ID4, for example, felt uncomfortable because, unlike the global bank he worked at, "there is no one to give instructions, so the discussions don't come together." ID13, who was also elected as chairperson of the management association, was involved in a legal battle with a 70-something single male resident that had been going on for two terms (four years). The resident suspected that the board members were taking a back margin from the management company and repeatedly demanded an explanation, leading to a lawsuit. "I am used to this in my company," ID13 said matter-of-factly, having worked for a famous insurance company since her first job.

This is symbolic of the fact that they say they are "used to it in the company" (ID13), even though it is "different from the company" (ID4). It is understood that a management association is a voluntary, non-professional organisation. However, most residents lack such organisational experience because most high-rise residents, including these interviewees, are upper-class white-collar workers.

The online survey revealed complex differences in attitudes by age or generation about what is important to them in terms of high-rise residential buildings and

what they are dissatisfied with in terms of management. This view of age or generation differences was plausible, given the age or generation bifurcation in high-rise residential buildings. However, when the interviews delved into the actual situation, another explanation became possible. The difference in administrative dissatisfaction may be more a function of lifestyle, related to family type, than age or generation. When these lifestyle differences are combined with age or generational bifurcation, obsolescence or physical ageing is not only limited to the use of common facilities and services but has also become a reality, with the increase in residents "staying home" causing damage to common areas.

Furthermore, the operation of management associations facing these problems of obsolescence seemed to be more a matter of insufficient empirical knowledge in organisational management than of conflicting interests and claims from different age groups or generations. While they are aware that the methods for managing an organisation of a certain size are not suitable for a management association, they have not found any other methods to adopt.

4.2. Old-Age Life Transition

Next, I would like to turn again to demographic ageing. Among the interviewees, a husband and wife (ID1 and ID2) are the oldest, born in 1951–1955. Both are in good health, although they visit the hospital regularly. They have no concerns because the bay area has several major hospitals in proximity and a mall clinic attached to the high-rise residential building itself.

In contrast, ID3 was interesting. In 1993 (39 years old), she and her husband set up a cosmetics import and sales business. In 1996, they moved from a private flat to a high-rise public rental in the bay area due to the location of their business and its advantage as a warehouse and residence. In 2015, her husband passed away, and since then, she moved thrice from a four-bedroom apartment to the most recent 1DK within the same building. In 2020, she closed her business following the Covid-19 pandemic and began working an irregular job (in the packaging industry) due to the burden of rent. Rental residents accounted for 34.6% of the respondents in the online survey, of whom 18.3% were over 60. She now faces the double burden of family and work. Although she has gradually reduced the size of her house to make ends meet and obtained part-time employment, she is worried that she will eventually have to move out due to the high rent.

The public rental housing where she has lived for nearly 30 years is well managed by a public organisation and is supported by the neighbourhood, which she calls a "vertical *nagaya*" (traditional and communal tenement). She not only "hangs around" in the neighbourhood, giving and receiving handouts, but also has a lot to do with her neighbours. In spring, they would go together to cherry blossom viewing parties, and on holidays they would bring wine and cheese for lunch. A sense of security and shared lifestyle had been established in the neighbourhood.

So far, for younger people, the difficulties around employment and housing acquisition during the transition process from dependent to independent have been problematised as "life transitions" (Elder & Giele, 2013). However, even in older people like ID3, "old-age life transition" cannot be ignored, due to the inability to transition from dependent to independent, especially in high-rise residential buildings that demand relatively high rent or management fees and maintenance and repair charges.

This is because a certain number of DINKS or singles, like ID3, are also found in their 40s and 50s. Looking at the online survey, the percentage of singles cannot be ignored, with 18.3% of over-60s, 16.9% of 50-year-olds, and 26.8% of 40-year-olds falling into this category. The following section will therefore compare single women in their 40s and 50s to examine how and why they choose to live in high-rises and what their prospects may be.

4.3. Women's "Ontological Security"

The following is a summary of the life histories of four single women in their 40s and 50s. (A) and (B) in the text are the codes used in the subsequent analysis. As will be analysed in more detail later, the letter (A) in the text indicates what these women were looking for in a high-rise residential building and the letter (B) in the text indicates that these women have confronted anxieties and insecurities that seem to be shaped socially and structurally.

Firstly, ID13 is a 50-year-old woman working for a major non-life insurance company who moved to Tokyo from the countryside in 1988 and found a job "where the pay is good anyway." She describes herself as part of the "bubble generation." As "a rural woman" (B), she was working to have "her own house" as soon as possible (A). She had learned to play jazz piano in her 20s and had considered ways to make a living at it but had not yet found "a house of her own" (B) and could not quit the high-paying work. In 2009, she fulfilled her wish and bought her current high-rise condominium (one bedroom). In 2020, she was transferred to a subsidiary company triggered by the Covid-19 pandemic. She was relieved of her managerial position, and she began to wonder if she was happy with her life up until now (B). This interview was an opportunity for her to start thinking about what she could do with jazz once more.

Next is ID14, a 49-year-old woman. She was born in Tokyo but has moved from one place to another. She started working for a major pharmaceutical company in 1993 and has been there ever since. She has given birth and divorced (B) and has lived in a "luxury house" (A) for the sake of her daughter (B). In 2018, when her daughter became independent, she moved to her current public high-rise rental near her workplace (A). However, after

the Covid-19 pandemic, her workplace changed, and it took longer to commute to work (B). This has also led to anxiety: "I'm a single woman, what if I fall ill" (B). She said that she hoped that this study would shed light on such anxieties for single women.

The third is ID15, also a 49-year-old woman who has worked as a beautician since the 1990s but became bedridden (B) after suffering from an incurable illness and stalking. Sudden exposure to Ayurveda led to her recovery, and she became a qualified instructor. In 2009, she became independent and rented a high-rise from a friend. The deciding factor was that there were "no strange people around" (A). In 2020, when her clientele declined due to the Covid-19 pandemic (B), she moved to a public high-rise rental, where the rent burden was lighter (A). She is satisfied that she is prepared to look out for herself, as she could collapse again at any moment.

ID20 is a 47-year-old woman who has worked as a researcher for a major food manufacturer since her first job. She moved to Tokyo from the countryside when for higher education. She has lived there to this day, always thinking that she could return at any time (B). She has lived in company housing (B) since she started working, but she kept thinking that she wanted to live in a "proper structure" (A). On the recommendation of a friend, she bought a high-rise condominium. She works in the suburbs but chose to live in the city centre for more lavish and distracting consumption (B).

The four women are roughly from the same generation, born between 1970 and 1973, which may be better collectively referred to as the "bubble generation." They experienced university graduate employment between 1985 and around 1994, as ID13 told us.

As mentioned earlier, the letter (A) in the text indicates what these women were looking for in a high-rise residential building. "My own house," "a luxury house for my daughter," "a house where there are no strange people around," "a house with a proper structure." It varies but would be related to "autonomy" (Darab et al., 2017) or, if contrasted with housing insecurity, "ontological security" (Giddens, 1991), which is felt as the flip side of the insecurity inherent in modern societies.

On the other hand, the letter (B) in the text indicates that these women have confronted anxieties and insecurities that seem to be shaped socially and structurally. For instance, the demand for "my own house" in ID13 is the flip side of her socially insecure self-consciousness as a woman. In fact, she was forced to make an involuntary transfer at the moment she had gained a "home of her own" and was building her career. The demand for a "luxury house for her daughter" in ID14 is also based on a social context in which women are forced to take on the responsibility of raising a child. Just as she, too, was relieved of this responsibility and turned her attention to herself, her workplace was changed. She was made aware of the absence of someone to care for her.

There is also a serious wish for "a home where there are no strange people around" in ID15. She suffers from stalking and psychogenic physical problems. She is overcoming this on her own, but constant supervision services are essential. Moreover, the Covid-19 pandemic has closed the door to the path that she had just found for herself. At times like these, public rentals have literally become a rare safety net. The "structure" of the "house with a proper structure" in ID20 is suggestive. Her feeling that she can return to her hometown at any time is like being suspended in mid-air. The "structure" she refers to is a building structure that "doesn't leak sound" and "doesn't collapse in earthquakes," as well as a structure that alleviates this feeling of being suspended in mid-air.

The social and structural insecurity of these women has been considered in the Japanese sociological context. Sugita (2018) revealed that the sense of insecurity of Japanese women has been shaped since the Equal Employment Opportunity Act for Men and Women was established in 1986 because that act promotes new graduate women's entry into the labour market without actual correction of gender disparities of employment conditions. The above-mentioned female interviewees were born in 1971–1975 and have precisely struggled with that act ever since they started working. As Giddens (1991) suggested, the sense of insecurity of these women is considered to evoke in them a sense of "ontological security" compensating for their insecurity.

However, these women, if they continue to accumulate their lives, will face "old-age life transitions," as in ID3. This is the case even if high-rise residential buildings provide "ontological security" for these women today. This is because, for ID3s in their 40s and 50s, their current housing was indeed a source of "ontological security" ("vertical tenement"). However, because of this, ID3 finds it hard to leave, and it makes her financially insecure. "If they let me work properly, they would see that I am a more useful person. They repel me because of my age," says ID3 after being rejected from several recruitment interviews. She is not free from the structural problems of the modern Japanese workplace, which mechanically rejects older people based on age. Given the structural nature of inequality that haunts contemporary Japan, it is impossible to say that the fetters that restrict her will disappear in the future for single women from the "bubble generation."

5. Conclusion

First, the trend of demographic ageing in the districts where high-rise residential buildings are concentrated is analysed. The results show that demographic ageing in high-rise residential buildings is faster than in other residential buildings because the age group of the residents is concentrated across two generations: the generation born in 1946–1955 and the generation born in 1966–1975. Unlike the findings of Otani (2020) in the general housing complex, the demographic analysis in this article finds that a certain number of the

generation born in 1946–1955 reside in high-rise residential buildings from the beginning of subdivisions. Therefore, high-rise residential buildings are required to cope with severe ageing problems within 10 years or so of completing construction. This response was the envisaged physical ageing in Saito (2016) as mending facilities for promoting the accessibility of old residents. Accordingly, demographic ageing and physical ageing, as it were, double ageing of high-rise residential buildings in the Tokyo Metropolitan Area is faster than Machimura (2020) assumed. The speed and urgency of this double ageing are unique not only in general housing complexes in Japan but also in high-rise residential buildings in other world cities (Amarya et al., 2018).

Second, the relationship between demographic and physical ageing was examined through an online survey of 978 residents of high-rise residential buildings conducted in January 2021. A generation gap in values regarding their own high-rise residential buildings was clearly identified. In the wake of the Covid-19 pandemic, residents aged 60 and older valued "well-managed" and "hygiene in their flats" more than residents aged 60 or younger. On the other hand, residents aged 50 or younger expressed more discontent over the "lack of association board members" than residents aged 50 and older. Accordingly, the older residents aged 60 and over are more aware of physical ageing including obsolescence by the Covid-19 pandemic, as pointed out by Ghani et al. (2018) and Finlay et al. (2022), but they are not aware that the residents aged 50 or younger feel that they are being forced to deal with that physical ageing. This double awareness gap between generations is considered to be a source of conflict in discussion or decision-making in management associations of high-rise residential buildings.

Third, the cause and result of the generation concentration and gap were investigated via an interview survey of 26 informants extracted from the online survey. Three main findings emerged. First, the ageing of the generation born in 1946–1955 has given rise to housing insecurity because of the decline in income in high-rise residential buildings that demand relatively high rent or management fees and maintenance and repair charges. This article conceptualised this housing insecurity (O'Neil et al., 2020) caused by age-related income decline as "old-age life transitions" based on the symmetrical characteristics of "life transitions" of Elder and Giele (2013) and attracted attention to the previously unnoticed (e.g., Easthope, 2019) aspect of double ageing specific to high-rise residential buildings.

Second, the high rate of singles within the generation born in 1966–1975 may be a result of housing insecurity after their retirement. The high rate of singles, especially among female residents, is considered not to be accidental. Because of social insecurity unique to Japanese women born after 1966, about 20 years later, in 1986, the Equal Employment Opportunity Act for Men and Women was established (Sugita, 2018), they have chosen the family type of single person as their own lifestyle, and they discovered the compensation for their social insecurity in high-rise residential buildings. This article conceptualised this characteristic function of high-rise residential buildings in Japan as "ontological security" for contemporary Japanese women based on the general remarks on contemporary society of Giddens (1991).

Third, the introduction of social distancing has accelerated the substantial "ageing" of relatively good facilities, but as for the link between demographic ageing and physical ageing, a straightforward age or generational conflict was not fully deciphered in this article, unlike the previous argument of Saito (2016) and Hirai (2017). This is partly because age or generation differences are also intricately related to differences in lifestyle, as the interview of ID1, ID8, ID16, and ID20 suggests. Those interviewees belong to different age groups and generations but share a lifestyle in which they have no children. Moreover, the differences in age or generation awareness are themselves an above-mentioned "double awareness gap" that is revealed by the online survey and suggested by the interview of ID1 and ID8. As it were, it is difficult for the over-60s to be aware of generation gaps and can be seen as the reason why the debate is divided between different generations.

Another possibility is that management associations do not have active discussions based on owners' conflicts of interest, as the interview of ID4 and ID13 suggests. Without sufficient discussion, it was also apparent that the situation was being handled in a clerical and mechanical manner, like a company dealing with a complainer. It appropriates the experiential knowledge of organised workers, who make up most of the high-rise residents. As ID4 and ID13 are aware, there should be a different handling of the management association, which is based on consultation between volunteer owners on equal footing, as it were, promotion of owners' participation in discussion on condominium management (Gao, 2018; Webb & Webber, 2017).

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Conflict of Interests

The author declares no conflict of interests.

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Article

Planning and Architecture as Determining Influences on the Housing Market: Budapest–Csepel's Post–War Housing Estates

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Abstract
In Hungary, post-war housing estates can be categorised according to the time of their construction. Thanks to the development of construction technologies and urban planning, these so-called generations of housing estates demonstrate different features with regard to their physical layout and socio-economic characteristics. Socio-economic transformation that took place after the change of regime (1989) was widely affected by the physical parameters of these neighbourhoods and their dwelling stock. Our results show that different generations of housing estates have followed distinct trajectories in the housing market; thus, in addition to their geographical location within the city, planning, architecture, design, and the dwelling stock play a significant role in the market positions of these generations of housing estates. House prices have risen rapidly in Budapest since 2014 up until the pandemic in 2020, and housing estates became popular segments of the housing market. The main aim of this article is to investigate the role of urban planning, architecture and the built environment in this real estate process. The research is based on empirical real estate investigations, statistical house price analyses, and fieldwork undertaken on housing estates. The case study area is Csepel, a former industrial town which became the administrative district 21 of Budapest in 1950. All types of post-war generations of housing estates co-exist, and the majority of the population lives in such neighbourhoods. This special geographical context makes it possible to explore the influential role of the built environment in the housing market. Empirical results from these low- and mid-rise housing estates can make a major contribution to the more effective and successful development of high-rise neighbourhoods.

Keywords
architecture; Budapest; built environment; Csepel; housing estates; housing market; socio-economic characteristics; urban planning

Issue
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1. Introduction

Due to intensive urbanisation and the concept of modern urbanism, housing estates (HEs) have been built almost everywhere around the world over the last hundred years, regardless of political-economic systems and levels of development.

Europe is one of the continents with a significant number of post-war HEs and occupants: more than 170 million people for approximately 56 million dwellings (van Kempen et al., 2005). After the Second World War, the efficient construction of HEs was inevitable given the shortage of housing that existed, and different types of mass housing based on standardisation and state involvement became a global product (Glendinning, 2021; Urban, 2011). Although the original urban and architectural ideas were similar, the final results reflect the political, economic, and technological differences

between Western and Eastern Europe, as well as reflecting differences between countries. In the Eastern bloc during the state-socialist period until the political change, the housing market did not really exist, but after the privatisation process in the 1990s, the post-war, mainly panel-style housing stock entered the market.

In Hungary, central planning, architecture, and construction have played a key role in shaping the built and social environment of HEs. Architecture, in a narrow sense, refers to the spatial, formal, technical, technological, and engineering solutions used in construction, but, in a broader sense, it also encompasses the culture, artistic solutions, and process of shaping the space (Navickas et al., 2020). In recent decades, the importance of careful design, liveability, accessibility, and environmental friendliness of the living environment has gradually increased in the construction and development of HEs. Within architecture, there has been a growing emphasis on creating a human-friendly environment in which form and function are in harmony. This can only be achieved and managed if architecture is closely intertwined with planning and design. In the long term, the success of harmonising these three processes will be reflected in the market position of HEs as well as in their prices.

The urban planning, architectural solutions, and technologies used in the decades after the Second World War, including the paradigms and ideologies that determined design and construction, have continuously evolved and changed, leaving their mark on the appearance of HEs. Considering the period of their construction, size, physical layout, and the technology related to building materials used, we can define different generations of post-war HEs.

The Hungarian HE generations are basically a combination of mid-rise buildings of eight to 10 storeys and low-rise buildings of three to five storeys without a lift. High-rise buildings over 30 m are rare, they appear only in the larger HEs in the form of 15-storey residential towers of 55 m in height. Research on the planning, design, socio-economic, and housing market characteristics of mid- and low-rise residential areas provides research results that can be successfully integrated into the planning and construction of high-rise residential areas. Research on HEs is particularly important in Europe because the spread of high-rise buildings in European cities is still far behind that of Asian metropolises, so the experience of building HEs in previous decades can be just as easily applied when developing high-rise residential areas today.

The objective of our study focusing on one area of Budapest is to show how the planning, architectural, and design solutions that characterise the built environment of the different generations of HEs can have an impact on their position in the housing market. In this context, we seek answers to the following research questions:

- How important is the role of planning, architecture, and design in the housing market position of HEs?
- What housing market trends can be identified in the development of HEs? How could the housing market processes of the different generations of HEs in Csepel be defined and characterised over the last two decades?
- What are the links between local social composition and architecture, planning, and design?
- What perspectives and breakthrough points are possible for the further development of HEs and the strengthening of their position in the housing market?

The case study area is Csepel, a former industrial town which became the administrative district 21 of Budapest in 1950. All types of post-war generations of HEs co-exist here, and the majority of the population still lives in such neighbourhoods. This special geographical context makes it possible to explore the influential role of the built environment on the housing market. The classification of case study areas is based on their architectural characteristics and social data from the Census 2011. There are no newer census data on HEs yet; therefore, we used house prices at the level of HEs calculated by the Hungarian Central Statistical Office (based on house prices provided by the National Tax Office). In order to obtain information on the condition of the building stock and renovation of buildings, empirical surveys were carried out in the HEs for three different years (2012, 2017, and 2022).

2. How to Define Housing Estates?

The term "housing estate" can be interpreted in many different ways. In the broadest sense, from ancient times to the present day, they tend to be built as a series of identical or similar dwellings forming a spatial, planning, and architectural unit. They are distinctive within the urban fabric because of the way they are built as well as their architecture (Ferkai, 2005). Modernism in the first half of the 20th century drove the search for appropriate terminology for these rapidly multiplying residential areas. These distinctive districts or neighbourhood units were called *rayon* and *mikrorayon* in the USSR (Engel, 2019), housing estates in the UK, housing developments or public housing in the US (Glendinning, 2011), *Wohnunsiedlung* in the German-speaking world (Balla, 2021), and *grands ensembles* in France (Rotival, 1935). In post-socialist European countries, the word "housing estate" (in its narrowest usage) is stigmatised and refers to the neighbourhoods produced by prefabricated housing factories in the 1960s, 1970s, and 1980s based on uniform standards, design principles, and construction techniques (Hess et al., 2018). In Hungary, the definition of HE has changed several times over the past decades. At the beginning of the 1980s, a HE was defined as a part of a municipality, usually bounded by roads, with a group of dwellings forming a coherent unit. It had to contain at least one electoral district and have a separate name.

In the second half of the decade, a different definition was used: A HE was defined as a form of housing development based on a single plan, built in an organised way, usually based on a standard plan, containing multi-storey dwellings on common plots. Since the 1990s, the concept of HEs has become much simpler: They have been defined as a group of medium and high-rise blocks of flats, mostly built using prefab technology (Census HCSO, 2011). Our research was focused specifically on Csepel's post-war HEs, which were built between 1945 and 1990. The time span of more than 30 years since the regime change is important for several reasons. Firstly, after the regime change in 1990, dwellings were privatised, and private ownership became dominant in the housing market (Hegedüs, 2007). The HEs built later were already better adapted to market needs and may still be considered a "novelty" which increases the prices unrealistically. On the other hand, HEs built earlier already require intensive renovation.

The development of HEs has been closely linked to urban development and the evolution of the housing market in cities. In the socialist period, land and housing stock were state-owned, and supply and demand as well as land use and urban planning were under strong state control. The size, population, and consumption of housing in cities were limited by administrative measures (Tosics, 2005). State housing was mainly built in the form of high-density HEs (mostly in the outer zones of cities). Their construction was not only a means of alleviating the severe housing shortage but also an important ideological development. The party-state sought to underpin the power and performance of the socialist economy by building housing rapidly. HEs, by their very nature, provided at the same time a good opportunity to realise the socialist ideal of man (everyone being equal) and the two-child family model. This explains why about 40% of the population of cities in post-socialist countries lives on large HEs and why they are far more important in the urban housing markets of post-socialist cities than in Western Europe (van Kempen et al., 2005).

The urban planning of the state socialist period changed the earlier urban structure characterized by low-rise outskirts and concentration of the highest residential buildings in the city centre. The mass housing construction resulted in the emergence of high- and middle-rise prefab buildings in the periphery.

After the change of regime, with the establishment of a capitalist market economy, decentralisation became the dominant factor in the political and urban policy field, resulting in privatisation and liberalisation of planning in the economic and housing market development processes (Enyedi, 1998). New HEs were rarely constructed, and those that existed started to gain a different market value depending on when they were built. In older generations (especially in the HEs of the 1950s), the influx of younger, better-educated strata could be detected bringing a relative upgrading of the housing market, while in younger generations (both in the HEs of the 1970s and 1980) an ageing process and a gradual socio-economic downgrading has taken place (Kovács et al., 2018).

3. The Influence of Planning, Architecture, and Design Values on the Housing Market

It was in the late 1970s that researchers began to point out that architecture, planning, and design could add significant value to the real estate market (Ching, 1979). The concept of real estate market value can be approached from two main perspectives: (a) the value the built environment generates and (b) the determinants of market value as a measure of impact on real estate economics. Macmillan (2006) distinguishes six types of value that the built environment can represent in the real estate market: The most important from a housing market perspective is exchange value, the actual price that the property can be sold for on the market. Besides this, the built environment also represents use, image, social, environmental, and cultural values as well. According to Dubin (1988), the location (geographical location or relative position), structural attributes (size, rooms, age, etc.), and neighbourhood characteristics (socio-economic and physical features) are among the main determinants of market value.

The perception of architectural quality varies over time. Commemorative value relates to the past, while current value relates to the present. In the case of a HE, the present value, in particular its location and use value, is priced by the housing market. Two types of value can be assessed in HEs—the novelty value and the relative artistic value (Riegel, 1903). The novelty value is always about timeliness, i.e., whether in the era of planning and building you can offer something new, different, and forward-looking. Professional awards for urbanism and architecture (apart from the political background) usually qualify this. In the case of HEs, the award has often been given for the development plan itself, its value as a public building, or, less often, a residential building. Half of the six sample sites in Csepel have at some time been award-winning HEs. It is up to the present day to identify the relative artistic value. In Western Europe, an increasing number of modern and post-modern buildings and complexes are becoming listed, but Hungary's HEs are still waiting. Of the six sample sites in Csepel, the oldest modernist HE built in the late 1940s is the one with the greatest relative artistic value. The mini-HEs, the prefabricated buildings, do not have the same value because of their sheer size and their architectural character.

Navickas et al. (2020) identify five areas where architecture has an impact on the real estate market. It is essential to highlight the *spatial dependence*, *spillover effects*, *and externalities* of architecture. There is a relatively long history of studies on the dynamics and spillover effects of house prices at the neighbourhood level (Can, 1990; Wilhelmsson, 2002). In recent years, research on the effects of location and residential environment on the real estate market has gained

momentum (Cellmer & Trojanek, 2020), which provides evidence of the spatial dependence of real estate market processes. Among the studies analysing the significance of *urban and architectural design quality*, the first seminal studies that investigated the effects of the built environment were published in the 1980s. Hough and Kratz (1983) used a hedonic regression model with office market prices in the Chicago central business district, demonstrating that commercial buildings that won architectural awards had a 22% higher value premium. Vandell and Lane (1989) used office buildings in Cambridge and Boston to show that the quality of architecture and design correlates with the rent premium, i.e., the higher the quality of design, the higher the price premium. A similar conclusion was reached by Smith and Moorhouse (1993), who studied the effects of architecture on prices in Boston's residential sector. Using a model that included dwelling size, dwelling characteristics, building materials, architectural style, and features, they concluded that architecture and planning have a positive impact on property values. Lindenthal (2017) recognized the relationship between higher property prices for homogeneously designed residential houses in Rotterdam compared to heterogeneously designed ones. In terms of *heritage aspects*, it has been highlighted that heritage-protected buildings tend to have a positive effect on the residential value of neighbouring buildings (Rudokas et al., 2019). Architectural design and good quality architecture can attract buyers and customers for whom *sustainability* is a priority (Fadaei et al., 2015). From the perspective of *architecture as a non-market or public good*, Scerri et al. (2019) pointed out that architecture as a public good can capture the local characteristics of a place, which can be attractive to local residents and tourists. From the above, we can conclude that planning, architecture, and design can add value to the built environment in both quantitative and qualitative terms. The main problem with creating planning, architecture, and design values is that the developer's goals are predominately short-term and quantifiable, whereas both the user's and community's goals are often long-term and intangible (Millhouse, 2005).

4. Characteristics of Housing Estates in Hungary and Budapest

4.1. On Housing Estates in Hungary and Budapest in Brief

In 2022, of the 4.4 million dwellings in Hungary, 927,000 are in HEs, which makes up 20% of the housing stock. About 600,000 dwellings were built using prefabricated technology, while another 100,000 dwellings in HEs were built before the introduction of prefab technology, using medium or large blocks or cast concrete. There are also more than 200 thousand brick-built HEs. In Budapest, the number of officially recognised HEs is 121, and there are 240,000 dwellings located within these estates. Seven out of the nine giant HEs in Hungary with more than 10,000 apartments are located in Budapest (Egedy, 2000). In sharp contrast with high-rise cities like Hong Kong (Forrest et al., 2020), high-rise housing is only a small part of the housing stock in Budapest and not even the highest residential buildings are skyscrapers. Based on their planning, architecture, and design, we can distinguish different generations of HEs. A generation of HEs is a group of estates built in roughly the same decade using the same construction technology and grouped together mainly on the basis of similarities in their built environment (see Table 1).

The share of the population living in HEs is around 20% in Hungary and about 30% in Budapest. HEs in Hungary and Budapest generally provide homes for lower-middle class strata. Single people, young couples, and single parents are more likely than average to live in HEs. In older generations of HEs (especially in the HEs of the 1950s), the influx of younger, better-educated strata could be detected since 1990. Since that time, an ageing process and relative social-economic decline have taken place both in the HEs of the 1970s and 1980. HEs, in particular panel estates, fulfil an important housing market function, as they provide an affordable solution for young people entering the housing market and buying their first home or an alternative for elderly people who want to reduce their housing consumption (replacing an expensive family house with a cheaper HE dwelling for single pensioners). This is basically due to the fact that house prices in prefabricated HEs are, on average, 15 to 30% lower than in brick buildings and houses. Although the share of residents with tertiary education is growing in all generations of HEs, the dynamics lag behind the Budapest average. In relative terms, our results testified to a gradual downgrading process in the social status of HEs.

Processes of social exclusion and influx of immigrants, as in some Western European HEs, are not typical in Hungary or Budapest. Thus, problems regarding ethnicity, poverty, marginalisation, or discrimination appear only in a very limited form compared to other European countries and cities (Kovács et al., 2018). With regard to segregation processes inside the buildings, it can be said that the vertical segregation in the prefab buildings is weaker than in the inner city, and it follows a different pattern (Kovács et al., 2022). The social status is in parallel with the height in the inner city of Budapest, just like in historical European metropolises (e.g., Paris) and in some cities with newer building stock (e.g., Athens; Maloutas & Spyrellis, 2016). The segregation shows a different pattern in post-socialist cities like Bucharest: Dwellings on the middle floors have the highest prestige (Marcińczak & Hess, 2019). The same holds true for the mid- and high-rise estates on the outskirts of Budapest.

The effects of the 2008–2009 economic crisis on the housing market in Hungary had largely subsided by 2014 after the trough in house prices in 2013. Since then, the real estate market has seen a dramatic price increase,

Table 1. Generalised characteristics of generations of HEs in Hungary.

	1950s	1960s	1970s	1980s
Planning issues	socialist realism, later modern architecture	Long-term housing plans, use of normatives and standards, and demolition/ replacement, prefabrication	Excessive central planning, housing factories, technology defines urban landscape, demolition/ replacement, and greenfield development	Increasing private housing, higher quality, and humanisation
Location	Transition zone (between the urban core and periphery)	Transition zone	Peripheral	Peripheral, outlying subcentres
Building technology	Brick	Brick, block technology, and panel technology after 1965	Panel, large panel	Panel and brick
Building stock	Three to four storeys	Four to five, later nine to 10 storeys	10-storey slabs and 15-storey towers	Nine to 10 or four to five storeys
Average housing stock	500–1,000	1–2,000	3–5,000 (+giant estates)	2,000

which has also affected the HEs and has led to a boom in house prices. In the prosperous municipalities, housing stock has appreciated, house prices have risen above their surrounding areas, and the quality of housing has also improved considerably (e.g., in Budapest and in the western part of Hungary).

4.2. Urban and Architectural Characteristics of Housing Estates in Budapest Csepel

Csepel, the former industrial town, the land Manfred Weiss Steel and Metal Works annexed to Budapest in 1950, nowadays promotes itself as a garden city. Industrial production began in the area in the mid-1880s, and by the time of the First World War, the company employed 30,000 workers. After the Second World War, the company was nationalised, and, during the socialist decades, it grew into one of the largest heavy industry complexes in Hungary. During the state-socialism between 1949 and 1989 (Benkő & Kissfazekas, 2019), it was a district recognized by the Csepel Works and the HEs built for the working classes. After the change of political and economic regime, everything was privatised. The factory was divided among more than 200 owners, and the flats in the inherited housing stock became private, inhabited mainly by their owners.

Recently, approximately two-thirds of the actual population of Csepel lives in one of the 14 HEs (Csepel Budapest, 2017). The land use map shows clearly that the HEs are compact and located along the main axis of the districts (see Figure 1). In addition, their green open spaces remained public after the privatisation process, a huge, detached house area developed next to the Little Danube, and now the state has started to realise Budapest's 36 ha new public park in the north eastern zone of the district.

In this article, the selected six HEs are presented from an urban design and architectural perspective (see Table 2). These areas represent each generation of HEs, and, with different locations (central and peripheral), these characteristics have a major impact on the prestige of HEs (Benkő, 2015). Following a chronological order, the next section presents the main components of the initial physical environment of these HEs. It highlights some points that could affect their actual market position based on contemporary lifestyle, human needs, and housing values.

4.2.1. Béke Square Housing Estate

The Béke Square HE was the first to be planned and realised after the beginning of the communist regime in 1948 to create a new home for the family of the top employees of the Csepel Works. It is very well located, around a Catholic church, between the terminus of the new suburban railway opened in 1950 and Csepel's football field. This is the district's smallest HE with 352 flats in two different types of four-storey high residential buildings: a slab and a cube. The urban and architectural solutions reflect the early modernism of the interwar period: stand-alone buildings in a green public park; well-orientated one to two bedrooms apartments with big windows or flat roof brick houses (see Figure 2); and human-scaled, green, and car-friendly

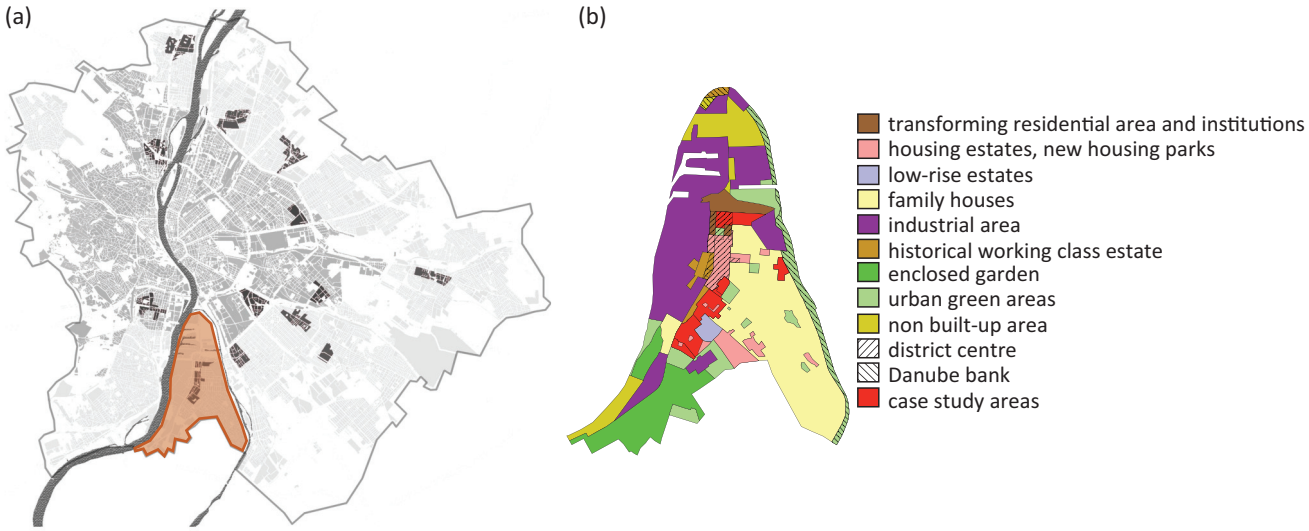

Figure 1. Csepel: (a) Location of District 21 and (b) land use in Csepel. Source: Authors' work based on Csepel Budapest (2017).

areas with buildings built using traditional technology, without an elevator, but with sophisticated architectural details. This neighbourhood can be classified as one of the first modern experiments in Hungary to realise HEs using standardised residential buildings.

4.2.2. Csillagtelep Housing Estate

Csillagtelep was planned just after the socialist-realist period in 1954–1955 and realised between 1955 and 1966. Altogether, 1,893 flats were built in the 1950s and

Table 2. Characteristics of the case study areas.

	Construction period	Number of dwellings	Building type	Share of prefab flats (%)	Location within the district
Béke Square	1949–1966	352	Brick, three and four storeys	8.3	Central
Csillagtelep	1954–1967	2,159	Brick, three to five storeys	14.4	Peripheral
Ady Street	1959–1979	3,714	Panel, 10, 11, and 15 storeys	86.0	Central
Királymajor	1977–1979	1,216	Panel, five and 11 storeys	100.0	Peripheral
Simon Bolivar	1982–1989	3,371	Panel, five and 11 storeys	100.0	Central
Rakéta Street	1986–1988	756	Panel, four and five storeys	100.0	Peripheral

Figure 2. Béke Square HE: (a) Layout and (b) experimental type of a modern residential building with the Reading Worker statue (1951) in the foreground. Source: Sziklai (1953).

other 266 at the beginning of the 1960s. The neighbourhood is composed of residential urban blocks around an inner block of a primary and a secondary school complex. In the residential areas, three-to-four-storey-high slabs and cubes built using different traditional technologies form smaller urban units organised around their open public, car-free, green courtyard. Small basic services (nursery, bakery, traffic, post office, etc.) established in kiosk-like buildings served the inhabitants (see Figure 3). The neighbourhood has a clear urban structure based on a new street network, and the residential buildings are well orientated, but the flats are small: approximately 60% are just studios, 30% are one-bedroom flats, and most of them have no balcony. Being isolated and at the edge of the district, Csillagtelep became like a small city within Csepel with an introverted but strong community.

4.2.3. Ady Housing Estate

The regeneration of Csepel's centre according to the modern concept of demolition and replacement started in the 1950s. Ady HE, officially the third phase of the regeneration project, became one of the first Hungarian HEs fully constructed using prefabricated concrete panels produced by factories. Here, at the beginning of the "panel period," two different technologies were used: the Soviet and the Danish Larsen-Nielsen. Along the main road toward Budapest's historic city centre, five 10-storey-high Soviet panel slabs border the north side of the HE, creating a drastic rupture in the urban fabric giving the impression of a landmark wall. On the contrary, the four 11-storey-high Danish perpendicular slabs are only oriented towards the east or the west (see Figure 4). However, in these residential buildings, the flats have no balconies. The Ady HE is composed of approximately 3,700 flats, and all the basic public facilities (e.g., nursery, primary school, playground, senior residential home, and other services) are located in standard buildings along the main inner axis of the urban composition. The central zone is a green, car-friendly, calm environment, and the parking places (one for every 10 flats) are located at the edge of the superblock.

4.2.4. Királymajor Housing Estate

Built in 1978–1979, the Királymajor HE consists of a single building, an 11-storey-high tower. In some places, this building stands alone, whereas, in others, three or four units are connected in a zigzag pattern. There are six apartments on each floor, four of which are in a corner position and have balconies, and two smaller ones are unidirectional. A total of 1,216 apartments have been built here on the edge of the industrial area and detached housing zone, away from the centre of Csepel and the other HEs. Királymajor's special value is the proximity to a branch of the Little Danube as well as the green

Figure 3. Csillagtelep: (a) Layout and (b) open inner courtyard built in the 1950s. Source: VÁTI (1968).

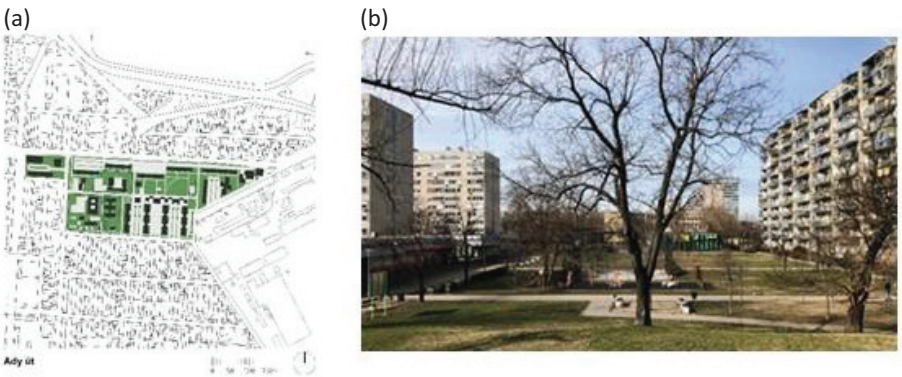

Figure 4. Ady HE: (a) Layout and (b) slabs built by the Danish Larsen-Nielsen (left) and Soviet-type (right) panel technology.

infrastructure (Balla, 2019). The natural landscape is visible from almost every apartment and can be experienced by everyone as they leave the building (see Figure 5). Along with the residential buildings, the primary level facilities and the public green park of the neighbourhood have been developed in a sophisticated way.

4.2.5. Simon Bolivár Housing Estate

The architecturally award-winning superblock is composed of three different urban areas: along the main street 11-storey-high zigzag slabs provide a clear borderland (see Figure 6), meanwhile on the three other sides, human-scale, four-storey high panel buildings frame the development (Barna et al., 1995). In addition, public facilities are grouped in the middle of the central green park of the neighbourhood, forming an ÁMK (general cultural-educational centre). Another unique feature introduced here is the Dutch Wohnerf system, a shared space organisation of the traffic between the residential buildings and the public centre. In 1976, a new catalogue for panel buildings appeared with some small opportunities for innovation: corner sections to allow more complex urban compositions, as well as apartments for different households, to accommodate multi-generational families, large families, or single people. Technology followed new demands slowly, and the famous family "E" panel with a 5.40 m panel structure was realised only in 1982 (Körner & Nagy, 2006). As a consequence, the interior organisation of the panel flats changed, and larger living spaces with small bedrooms became typical.

4.2.6. Rakéta Street Housing Estate

One of the last HEs to be built in Csepel and communist Hungary is Rakéta Street HE, built between 1986 and 1988. It is a small neighbourhood with only 756 flats, on the southern border of the district, between the Csillagtelep from the 1950s and the cemetery. Five-storey apartment blocks are arranged along a quiet green lane with no cars, and the entrances and parking spaces are located on the other sides of the buildings (see Figure 7). It was constructed as a residential development because of the ageing of the neighbouring HE,

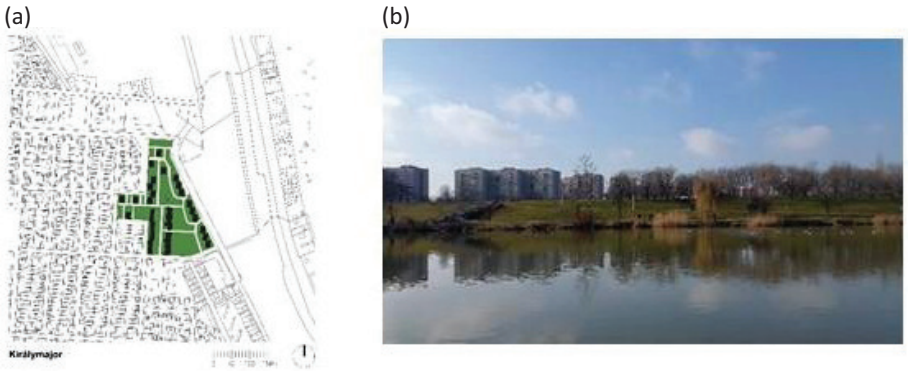

Figure 5. Királymajor HE: (a) Layout and (b) location on the riverbank of the Danube.

Figure 6. Simon Bolivar HE: (a) Layout and (b) detail of the superblock.

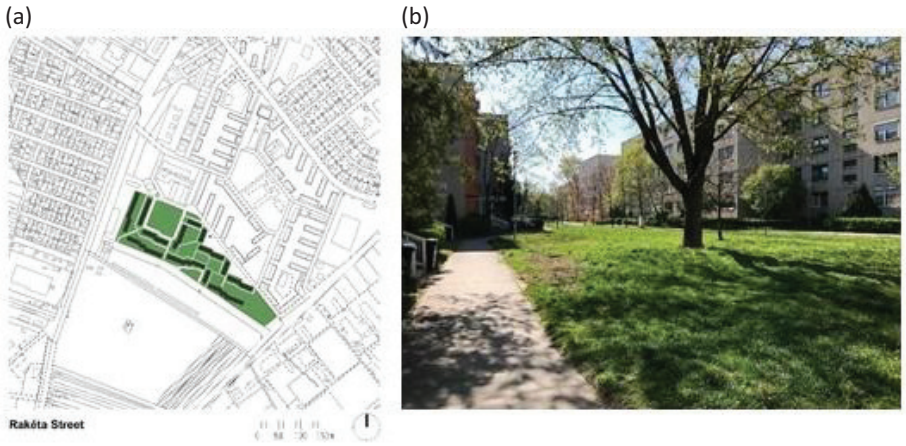

Figure 7. Rakéta Street HE: (a) Layout and (b) car-free street with inner green space between the low-rise slabs.

Csillagtelep. It was thought that newcomers could use the existing public infrastructure of the area.

5. Socio-Economic Characteristics, Housing Stock, and Housing Market Positions of Csepel Estates

5.1. Local Social and Demographic Conditions

Csepel is traditionally a working-class district, where the earlier social profile still has an effect on the recent social composition. The demographic profile of the HEs shows a younger population compared to the low-rise residential areas of Csepel. The share of young people (aged 20 to 40) is 32% in HEs, while it is only 26% in low-rise residential areas. The difference between the HEs is predominantly based on the construction period. The share of the elderly population (60+) is somewhat higher in the older generations of HEs (e.g., 30% in Csillagtelep, built in the 1950s), while it is lower in the newer estates (only 15% in the Simon Bolivar HE built in the late 1970s and early 1980s). HEs typically provide homes for families with children (Kovács et al., 2018), and the ratio of children in HEs is between 14 and 19%.

HEs are essentially for middle-class groups, meaning those who have secondary level education and those who work in middle-income professional groups (ISCO3–5). This perfectly fits the HEs of Csepel, because 68% of the population has completed secondary education, almost 20% have a lower level of education, and only 15% have a university degree. In general, 29 to 31% of the active population of HEs are in the middle employment categories (ISCO3–5). Thus, the social status of the HEs in Csepel is basically lower compared to other parts of the district.

There are apparent differences in the social status of HEs. The status is the highest in the Rakéta HE (17% higher educated and 22% professionals), which is the newest HE with larger flats. In the second half of the 1980s, modernised HEs were constructed, wealthier families moved there, and the social structure of Rakéta is inherited from this period. The Csillagtelep and Ady HEs have a clear working-class profile. More than one-third of the active population are manual workers, and more than one-fifth of the population is uneducated, showing the traditional working-class profile of old Csepel.

5.2. Housing Stock and Rehabilitation

The composition of the housing stock in the district is two-fold: Sixty per cent of the housing stock is located in HEs, and the remainder is in low-rise detached houses. The composition of the housing stock by dwelling size depends mainly on the period of construction of the neighbourhoods. In the HEs, there are hardly any large dwellings (over 80 m^2), the vast majority of dwellings being medium-sized (50 m^2 on average), in line with the housing ideology of the socialist period. The proportion of small dwellings (less than 40 m^2) is between 25 and 35% in the older generations of HEs, much lower in the younger generations, and hardly ever found in the most recently built estates (see Table 3).

The urban rehabilitation program of the district government has also had an impact on the dwelling stock of HEs since it focused on large HEs (Szabó & Burneika, 2020). In Csepel, the district government launched an urban rehabilitation project (so-called Ady Project) in 2011, which included support for housing renovation in the central part of Csepel. The rehabilitation of the Ady HE as part of the central zone started in the early phase of the project; accordingly, the ratio of dwellings in completely renewed buildings in the early phase is 15.3% (see Table 4). The main period of the rehabilitation was in the middle of the 2010s when another 20% of Ady HE buildings were insulated. Rehabilitation of the Simon Bolivar and Csillagtelep HEs started in this period as well (Table 3).

Since the national and local rehabilitation programmes support only buildings built by prefab technology, old brick-built HEs can hardly afford to finance complete insulation. As a result of this, other low-cost and small-scale renovation activities appeared in the HEs that affect the house prices and values (e.g., painting

Table 3. Characteristics of HEs in Csepel.

	(a) Share of flats by size (%)			(b) Share of dwellings in renovated buildings (%)					
				Complete renovation			Partial renovation		
	Below 40 m^2	40–80 m^2	Above 80 m^2	2012	2017	2022	2012	2017	2022
Béke	26.7	72.8	0.5	0.0	0.0	8.2	68.4	71.4	77.6
Csillagtelep	35.2	64.3	0.5	0.0	7.1	8.1	23.5	29.3	39.1
Ady	17.1	82.6	0.3	15.3	35.7	35.7	0.0	0.0	10.9
Királymajor	27.2	72.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Simon Bolivar	13.8	84.3	1.9	0.0	9.7	12.1	11.5	18.2	24.9
Rakéta	3.9	89.9	6.2	11.1	11.1	11.1	11.1	29.6	33.3

Sources: (a) Census HCSO (2011); (b) Authors' own surveys in 2012, 2017, and 2022.

of buildings in Béke HE, partial insulation in Rakéta and Simon Bolivar HEs). Most of these renovations occurred in the first half of the 2010s. After 2017, the rehabilitation process slowed down in the district, only the buildings of Csillagtelep saw significant benefits from rehabilitation (10%).

5.3. Housing Estates Within the Local Housing Market of Csepel

With regard to house prices, there is a significant difference of more than 10% in transaction prices in HEs. Taking into account the average house prices per square metre, the highest rates could be observed in Csillagtelep and Királymajor (see Table 4). The former is a HE built with non-prefab technology and planning structure. The prestige of non-prefab, old HEs increased significantly in the housing market in the 2000s due to their green local environment, mid-rise buildings with brick walls, and the high share of small flats (preferred by young couples). The most important advantages include the traditional architectural structure (four- to five-storey high buildings), brick walls, and lots of green areas. The Királymajor HE is located in a good environment next to the Danube River, which is actually the only benefit of the HE.

The lowest house prices per square metre are in the Rakéta HE, which has a peripheral location. The composition of dwelling stock could be one of the reasons. An average flat is the most expensive in the Rakéta HE because a typical flat is 60 m^2, which is 10 m^2 larger than the other estates.

Due to the fact that renovation has a long-term impact on the housing market (minimum of five years), the most renovated HE, Ady, is still not among the most expensive HEs. However, a quite dynamic increase in house prices was noted (more than 340%) in those HEs which were renovated in recent years (e.g., Ady, Béke, and Simon Bolivar HEs)

The location and residential environment exert a powerful influence on the housing market, and their role in the prestige of urban neighbourhoods increased after the change of the regime (Nzimande & Fabula, 2020). In the case of Ady HE, the central location is rather a drawback because the estate lies in a busy junction of the main roads of Csepel with high pollution and noise. In the case of Királymajor, location has a positive effect on the housing market position of the estate (actually the only one) because the riverside provides favourable environmental conditions for its residents. Surprisingly, thanks to its location, it is the most prestigious HE in Csepel. The planning structure plays only a limited effect on the prestige, as the case of the Simon Bolivar HE shows: From an architectural point of view, it has better characteristics than Királymajor, but the prices are lower thanks to the less favourable location inside the district.

Table 4. House prices of HEs (in EUR).

	House price, in EUR/sqm (between 2013 and 2021)	Average house price 2021	House price change 2013–2021 (%, 2013 = 100%)
Béke	746.1	64,122	+351.1
Csillagtelep	809.8	54,692	+310.4
Ady	764.9	58,002	+354.2
Királymajor	809.5	66,659	+323.4
Simon Bolivar	742.7	64,710	+347.8
Rakéta	689.0	70,709	+325.8
Csepel HEs	768.1	62,915	+335.9
Csepel	789.2	69,804	+324.4

Source: Census HCSO (2011).

6. Discussion and Conclusions

According to Navickas et al. (2020), planning and architecture play an important role in shaping the built environment, and the built environment has a great influence on the real estate positions of HEs. In general, due to the technological disadvantages of prefab buildings, the older brick-built HEs and mid-rise buildings occupy a better market position. This is despite the fact that these buildings were originally built for the working classes, so the dwellings are small, and the buildings have no elevator.

The role of architecture and design is also reflected in the composition of the housing stock so that their effects on the housing market, although indirect, are evident in the long term. In terms of dwelling size, the housing situation in HEs has become more favourable over time. The younger the generation of a HE, the more favourable and heterogeneous the composition of the housing stock. This means a lower proportion of small dwellings (traditionally a major reason for people to move) and a higher proportion of larger dwellings (see the case of Béke Square vs. Rakéta Street).

The role of renovation and therefore of design in driving up house prices is particularly strong in HEs that have undergone significant renovation. This is well illustrated by the housing market situation in the Ady HE. The HE is in a medium position among the estates surveyed but has seen the most dynamic increase in the price per square metre. In those HEs where a complete renovation of residential buildings has not been achieved (e.g., architectural structure or financial means of the local society do not allow participation in support programmes), partial renewals were initiated and/or financed by the local community (see the cases of Béke Square and Csillagtelep). These interventions are more pronounced in older generations.

In today's housing market processes, the role of architecture has increasingly been taken over by urban design and urbanism. In other words, although house prices are influenced by the architectural image, it is the characteristics of the living environment and the urban design solutions used (e.g., the rehabilitation of public spaces and public buildings, the quality of the environment) that are more important. Environmental aspects became significant after the change of the regime, and they have a major impact on the market position within a district (Fabula et al., 2021).

Today, HEs are a significant asset in terms of liveability. A green environment, a low building percentage, child-friendly, car-free super-blocks, public services, and facilities within 15 minutes are all in line with contemporary urban design principles. Architecturally and technically, there is a big difference in the materials and technology used in residential buildings. Traditionally built brick houses are much more sought-after and offer a higher level of security than large-panel prefab blocks. Brick buildings are also richer in terms of architectural details (e.g., entrance, windows, etc.) and easier to adapt, which is a definite value-adding factor.

In Csepel, the green environment and the vicinity of the riverside give a positive market value to the Királymajor HE, which has neither good planning design nor renovated buildings and good transport connections. The case of Királymajor highlights well the changing role of location: While location (where to build up a HE) was not a planning issue in the state-socialist system when the whole urban area was owned by public planning authorities, it has now become the most important housing market factor. The planning and design of HEs lost their original value, although they were modern at the time of construction, they have no positive effect on the market value today (see the case of Simon Bolivar HE).

In Hungary and in the HEs, the majority of people live in low-rise and mid-rise buildings, with high-rise being a negligible housing market factor. The real estate prices in Budapest show that low-rise represents a more valuable housing market segment than mid-rise due to their human scale, proximity to land, and access to green spaces. The value of the mid-rise today is driven partly by the accessibility of the dwellings because of elevators, an increasingly important consideration for the ageing HE population. On the other hand, the panoramic views from the upper floors of buildings in peripheral locations are an important asset. In the case of Budapest–Csepel, for example, this value is represented by the view of the Danube and its public park (Királymajor HE), the Buda Hills (slabs of the Simon Bolivar HE) or the city centre (the northern lanes of the Ady HE). The planning and design of high-rise buildings and neighbourhoods should therefore aim to create spaces and surroundings that allow residents to enjoy these benefits.

Looking back at Macmillan's (2006) theory of values, the importance of exchange, environmental, and image values clearly outweighs the role of use, social, and cultural values. Current real estate market prices show that the location, the quality of the immediate surroundings, and the size of the HE can easily override the value represented by construction, building, or structural attributes (Balla et al., 2017). The use value of a given dwelling and its renovation does not really add much to the exchange value, as everyone shapes their home according to their own needs.

From a historical point of view, an obvious repositioning of the main determinants of market value suggested by Dubin (1988) took place. According to our empirical results, the typical priorities of market value determinants characterising the early (socialist) phase of the development of HEs (i.e., structural attributes, neighbourhood characteristics, and location) were actually reversed and nowadays, in a market economy, the role of location is decisive, neighbourhood characteristics are important, and structural attributes play a subordinate role.

There is a strong correlation between the housing market situation, house prices, and the composition of

the population in HEs. The historical development of the neighbourhood (the importance of path dependency) has played a decisive role in shaping the composition of local society, which was later modified by the housing market situation through house prices. Differences in the built environment have led to different paths for HEs on the housing market, which also entails a slow transformation of the social environment. In the case of HEs, the curious situation is that before the regime change, it was architecture, planning, and design that had an impact on the composition of the local population moving in. After the regime change, in the new social and economic environment, they contributed rather to the significant change and differentiation in the composition of the population. All of this shows that the spillover effects of architecture, planning, and design in the housing market must be understood as a constantly changing and dynamic system over time.

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Conflict of Interests

The authors declare no conflict of interests.

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Article

High Neighbor! Residents' Social Practices in New Danish High-Rises

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Abstract
Historically, Denmark—like the other Nordic countries—has had relatively few, and relatively low residential high-rise buildings compared to other urbanized countries. Inspired by an international vertical urban turn, however, multiple high-rises have now been planned and built. This has refueled the debate on whether living in high-rises is compatible with Danish housing culture and our high standard of social life. From this local perspective, the article wishes to contribute to the emerging scholarship using an ethnographic approach to social life in high-rises while drawing on theories of practice and concepts of home. As part of the project "Vertical Residential Living: Updated Knowledge on Housing Culture and Social Life in Danish Residential High-Rises" (2020–2021), the article analyses more than 50 semi-structured interviews with residents and field observations of various social spaces in eight new high-rises in Denmark. Reflecting on the complex links between residents' homes, social practices, and shared spaces, the article presents three findings: First, vertical social life starts horizontally at the front door, outside one's home. Second, the character of social life taking place at the floor level is pivotal for entering the vertical community, and architecture, design, and interior are important here. Third, the article indicates that Danish home culture is echoed in residents' social practices in high-rises. Against this background, the article suggests that researchers also incorporate a more local and home-centered perspective on social practices, while studying—and planning—vertical neighborhoods.

Keywords
Denmark; high-rise; home; neighborhoods; social life; vertical practices

Issue
This article is part of the issue "Vertical Cities: The Development of High-Rise Neighbourhoods" edited by Brian Webb (Cardiff University) and James T. White (University of Glasgow).

1. Introduction

The vertical turn in global cities and urban development around the world (Harris, 2015; Kearns, 2012; Modi, 2014; Shilon & Eizenberg, 2021) has also affected Denmark (Council on Tall Buildings and Urban Habitat, 2022). Like many other Nordic countries, Denmark has relatively few and relatively low residential buildings compared to other urbanized countries (Drozdz et al., 2017; Lilius, 2021). Normally these only have 12 to 15 stories, while skyscrapers of up to 30, 40, or 50 stories are rare; however, some exist, and more are planned. This vertical turn has reinvigorated a historically rooted skepticism in the ability of high-rises to facilitate a satisfying social life, especially for children, which explains why Denmark never fully accepted the idea of residential high-rises.

Like most European countries, Denmark experimented with tall housing blocks during the 1950s and 1960s. However, several Danish architects criticized these high-rises for conflicting with the low-rise Danish housing culture and deemed them unfit for families with children (Nygaard, 1984). In 1969, the Danish Building Research Institute (now BUILD, Aalborg University) conducted a study that had a major effect on the debate (Morville, 1969). The report showed that children in high-rise buildings were less likely to spend time in common outdoor spaces and playgrounds than were children in low-rise buildings. Access to an outdoor social life also decreased with each increasing floor. The study concluded that high-rises were an unhealthy place for children to grow up:

> Now that all the mentioned negative factors of high-rise buildings for children's outdoor play have

> been revealed, one may ask why families with children choose this particular type of dwelling; it turns out that no one is motivated to make such a choice based on a consideration of the children. (Morville, 1969, p. 9)

The study was disseminated to the Danish public media. As a national newspaper headline summarized, high-rises amounted to "Seven Years of Prison for Children" ("Syv år i fængsel for Børn," 1968), connoting the age at which children in high-rises, according to the study, finally gained normalized access to social life on the ground level. The institute instead recommended low-rise housing and initiated a national architectural competition for experimental low-density housing in 1971, which added to the decline of Danish high-rises.

This critical attitude is not a uniquely Danish phenomenon. International studies often focus on residents' lack of social inclusion (Moser, 1981; Reid et al., 2017) and low level of social life (Fullagar et al., 2013; Haarhoff et al., 2016), underscoring the premise that sociality is challenged when you stack homes on top of each other (Hayden, 2002). For example, while recognizing social ties on each floor in a high-rise, Gifford (2007, p. 13) concludes that "social interaction is more difficult for residents to regulate. This can lead to withdrawal, and consequently, to the loss of community and social support" (Gifford, 2007, p. 13). In addition, examinations of safety and crime (Lees & Baxter, 2011) and a focus on deprived social housing estates (Kearns, 2012; Modi, 2014) also dominate international studies. This has led some researchers to conclude that the psychological and social critique is part of an inherited discourse (Kearns, 2012; Shilon & Eizenberg, 2021). However, an emerging body of ethnographic studies indicates the need for a more in-depth and thorough investigation of people's everyday practices in new urban high-rises (Baxter, 2017; Harris, 2015).

Based on the national Danish applied science project "Vertical Residential Living: Updated Knowledge on Housing Culture and Social Life in Danish Residential High-Rises" (2020–2021), whose results were published in 2021 (Mechlenborg & Hauxner, 2021), this article looks at social practices among residents in eight Danish high-rises. The broader social and cultural attention to home and social life has important implications, including decisions regarding major material alterations to buildings, infrastructure, and spaces, so the article wishes to contribute an ethnographic approach to research on high-rise living. The thesis is that practice theory (Schatzki, 2016; Shove et al., 2012) and a more home-oriented approach enable a better understanding of local housing traditions and social practices and therefore more effective planning of shared facilities, spaces, and functions.

2. New Approaches to High-Rises and Social Life in Planning and Research

Over the past 15–20 years, high-rise planning has seen a shift in target groups. Some studies argue that high-end buildings for the upper middle class and upper class with amenities that support community-building dominate the market (Fincher, 2007; Nethercote & Horne, 2016). Another study claims that planning favors occupants without families and children (Graham, 2016), while another comparative study of high-rise buildings in London and Melbourne shows how new high-end buildings have contributed to the gentrification of residential areas (Yuen et al., 2006). Fullagar et al. (2013) examine how various high-rise buildings in Brisbane target different groups with different housing preferences. However, Fincher points out, there is a mismatch between the intended target group and the real residents, because many of these high-end high-rise buildings are inhabited by students affected by housing shortages, which has consequences for housing quality and social life (2007). Also, Nethercote and Horne (2016, p. 1582) claim that urban practitioners are wrongly focused on high-end apartments for "young professionals and 'empty-nesters,' " therefore neglecting the many families and children that also inhabit the vertical city. Similarly, Whitzman and Mizrachi (2012) argue that the housing industry is not sufficiently aware of "vertical living kids," and therefore does not attend to children's need for shared spaces and safe pathways in high-rise planning.

However, the re-emergence of residential high-rises in global cities is also an introduction to new building typologies (Graham, 2016) and building techniques different from the earlier tall "black boxes" (Jacobs et al., 2007). Investigating these new typologies, Modi (2014) presents new, different kinds of high-rises that have added social spaces to the more conventional typology. While emphasizing the need for architects to facilitate social life in tall buildings, Modi (2014, p. 24) recommends transferring the "benefits of horizontal neighborhood communities that have for decades been the preferred environment for raising families" into vertical neighborhoods through the inclusion of semi-private spaces and shared facilities. Others suggest integrating elements from the city, arguing that social mix and mixed-use strategies can help to overcome the alleged lack of social life (Generalova & Generalov, 2020; Muhuri & Basu, 2021).

The "extraordinary vertical extension of built space" (Graham & Hewitt, 2013, p. 74) around the globe has also fueled an interest in ethnographic studies on the everyday lives of the new city dwellers (Graham, 2016; Whitzman & Mizrachi, 2012; Yuen et al., 2006). As Harris (2015, p. 609) argues, most research "across urban and political geography has tended to lack an engagement with these multiple everyday worlds," resulting in what he defines as a "hollowing out." According to Harris (2015, p. 607), "research on urban verticality risks replicating the panopticism of the omniscient and heroic downward gaze on the future city embodied by the modernist planner and architect," as described in Michel de Certeau's omnipotent view looking down from the World Trade Center.

In her work, Jacobs (2006) argues for a shift in perspective away from the building site as a firm entity and toward residential high-rises in their complexity of diverse networks of engagement, always in the making. Looking at vertical living as an ongoing "event" allows different individual experiences to exist mutually in the same space (Jacobs et al., 2007). This is the case in Arrigoitia's (2014) study of lifts, stairs, and walkways in a deprived high-rise in Puerto Rico. Drawing on "emotional geographies," Arrigoitia shows how building technologies can be seen as active mediators of the way personal and communal life are negotiated and remembered. The emotional aspects of space and everyday life are also at play in Nethercote and Horne's (2016) concept of "ordinary vertical urbanisms." Drawing on Harker's (2014, p. 323, as cited in Nethercote & Horne, 2016, p. 1584) similar work in Ramallah, Nethercote and Horne look at how families in high-rises in Melbourne are carriers of "complex and undervalued practices of what are thought to be normal (but not static) and common within and across intensive spatio-temporal relations." They conclude that families live in different "intimate geographies" that either enable or constrain sociality depending on their ability to create comfortable, mentally manageable spaces of everyday life. Shilon and Eizenberg (2021, p. 121) also emphasize the need for a "conceptual shift toward research on city users' experiences" by looking at how balconies and social media are entangled in and co-produce practices and emotional ties among vertical dwellers. They argue that material culture also embeds and produces emotional and cultural aspects of everyday life.

The point is that ordinariness is a window into how these geographies are constructed. As Baxter (2017) shows in his liminal work on the Aylesbury Estate in London, these studies are challenging the dominant "horizontal" perspective of high-rise living studies. Thus, Baxter argues that residents perform practices up and down, not only using lifts and stairs but via windows and balconies, when talking to neighbors on the street or actively participating in city life by gazing out, for example. The emerging interest in everyday life in high-rises by centralizing practices in high-rise studies is thus a turn towards the homelife of residents.

3. Practice Theory and Ideas of (Vertical) Homes

Practice theory has proven to be a useful tool for analyzing the ordinary due in part to its inclusion of materiality (spaces, facilities, technologies) and its focus on the routinized aspects of human conduct. Instead of focusing on structure, discourse, and individuality, it puts practice at the center of the social world (Schatzki, 1996, 2016). The aim is, first, to discover how various practices are performed and how they are interlinked (Shove et al., 2012). Of course, practices are performed by individuals, but practice theory looks at how individuals contribute to the maintenance of a complex network of practices. Thus, the individual can be considered a carrier of practices and the unique crossing point of many different practices in the individual's everyday life. As Reckwitz (2002, p. 249) explains:

> A "practice" is a routinized type of behaviour which consists of several elements, interconnected to one other: forms of bodily activities, forms of mental activities, "things" and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge.

Second, by introducing the concept of "general understandings," practice theory also studies how shared beliefs, concerns, fate, and collective values spread through practices (Schatzki, 1996). According to Welch and Warde (2017), general understandings are formulated both in sayings (the stories we tell each other and ourselves) and in doings (carried by practices). Third, practice theory has recently also started to include concepts of home and homemaking. According to Gram-Hanssen and Darby (2018), materiality in the dwelling can never be fully grasped without understanding home and the vision of the ideal home (or the general understandings) that forms our practices. Home implies emotions, memories, routines, intimacy, and questions of belonging (Blunt & Dowling, 2006). It involves placemaking, social status, and aspects of personal identity (Easthope, 2004). Home is the center of everyday life (Gullestad, 1989), but is not in itself a fixed entity (Douglas, 1991). Referring to "vertical practices," Baxter (2017, p. 350) explains how vertical living implies new aspects of home:

> If verticality as practice argues that verticality is not something that takes place in vertical landscapes but is actively constructed through action, then this foregrounds how verticality is engrained onto the body, memory and identity over time. This means that verticality does not just matter to residents, but can be central in their "being" at home, in the phenomenological sense.

By focusing on general understandings and practices, this article investigates how residents' social life reflects, conflict with, or is even encouraged by the shared spaces, functions, and facilities in eight high-rise buildings.

4. Introducing Eight Case Studies and Methods

The eight Danish high-rises in the study are the Silouette, in a small village outside Aarhus in Jutland; one tower from the Five Sisters buildings in Vejle, a town in Jutland; Campus College at South Danish University in Odense, Fyn; Bohr's Tower in the high-end district of Carlsberg in Copenhagen; the House of Amaryllis in an urban suburb of Copenhagen; the Silo by the harbor in Aalborg, the third biggest city in Denmark; Nordbro in the borough of

Norrebro, Copenhagen; and AARhus in the new district near the harbor of Aarhus in Jutland (see Figure 1). They were chosen from a longer list of new Danish high-rises. The first selection criterion was that residents had to be living there for at least six months, up to a maximum of 10 years. All the buildings are at least 12 stories tall, but, as noted above, Denmark—like the other Nordic countries—does not have a long tradition of tall buildings. Five of the eight buildings are 12 to 15 stories tall, two are 29 and 30 stories, respectively, while one is a mountain-shaped courtyard building with two towers, one 12 and the other 20 stories tall. All eight buildings vary in terms of architecture, context, ownership, and target group, as well as shared spaces and social facilities (see Figure 1).

Some of the high-rises were initially intended for a relatively narrow target group: Campus College for students only, Nordbro primarily for students and young people, Siloetten for local retired citizens, and Bohr's Tower for upper-middle class empty nesters. In all these cases except for Campus College, the residents' profiles ended up being much more diverse than planned. In other cases, greater variety in housing type and size was part of the planning: AARhus and Amaryllis Hus include dwellings for families with children, singles, and couples without children. The Silo in Aalborg combines social family housing, social youth housing, and exclusive owner-occupied penthouses of various sizes. In general, residents from low-income groups are less represented in the high-rises that are built in Denmark.

4.1. Analytical Concepts: Social Ideals and Three Types of Social Spaces

To some extent, all the high-rises in our study fulfill Modi's (2014) vision of socially sustainable high-rises by adding social spaces to their fabric. Except for the Five Sisters in Vejle, whose residents have access to an external social room within walking distance of their building, all eight high-rises offer shared spaces within the building structure: lobbies with furniture to sit in, shared facilities with workshops, guest rooms, kitchens and bar areas, rooftop facilities, and public cafés. As variation in shared spaces emerged as key to the investigation of social practice, we recognized the need to define the different types of shared spaces, functions, and facilities.

Name, and year		*Facts*	*Shared spaces*
The Silouette, the village of Løgten, 2010 C.F. Møller for Løgten Midt A/S	 © Julian Weyer, C.F. Møller Architects.	Detached high-rise / 12 estores / 21 units / suburban	Workshops for DYI, communal rooms for metings and private parties. Guestroom. Roof top terrase.
The Five Sisters, city of Vejle, 2013 Arkitema Architects for NCC and Domea Vejle-Børkop	 © Arkitema Architects	Detached high-rise / 13 stores /60 units / suburban	None
Campus college, Odense, 2015 C.F. Møller for A. P. Møller Fond/ Fonden Campus Kollegiet	 © C. F. Møller, Torben Eskerod.	Deatached high-rise / 14 stores / 250 units / open land	Each floor has shared kitchen/ living room. Roof top terrasses, meeting- and social room. Laundry facility and bike rent in the basement. Cafe and lounge area at ground floor.
Bohr's Tower, Copenhagen, 2016 RUBOW, Wilhelm Lauritzen Architects, Christensen & Co. Arkitekter A/S, Cobe Arkitekter, EFFEKT I/S and Nord Arkitekter	 © Vilhelm Lauritzen Arkitekter, CCO, Cobe, EFFEKT og Nord Architects / Rasmus Hjortshøj	Highrise on base / 29 stores / 88 units / urban context	Lounge area at the entrance

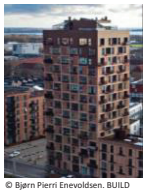
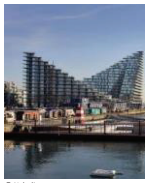
Name, and year		*Facts*	*Shared spaces*
Amaryllis Hus (the House of Amaryllis), The borrough of Valby, 2018 LOKAL, Mangor & Nagel for FB Gruppen	 © Bjørn Pierri Enevoldsen. BUILD	Courtyard with tower / 15 stores / 53 units/ suburban context	Shared courtyard garden and roof top terasse (buildings next to). Shared communal house for the area.
The Silo, city of Aalborg, 2018 C.F Møller Architects for A. Enggaard A/S, Østre Havnepromenade A/S and Himmerland Boligforening	 © Julian Weyer, C.F. Møller Architects.	Tall housing block / 13 stores/ 114 unites/ urban-open (harbour)	Laundry facility and postal area for residents at the social housing part of the building.
Nordbro, Copenhagen, 2019 © Arkitema Architects – Jens Lindhe.		Courtyard with tall tower / 30 stores /217 units / urban	Fitness, landry, work spaces, multispace with kitchen, shared inner coartyard with grills and tables, and a communal house with bar facilites
AARhus, Habour in Arhus East, 2019 BIG, 1:1 Landskab for Kilden & Mortensen	 © Nybolig	Mountainshaped courtyard building / 12 and 20 stores/ 255 units / urban-open context (harbour)	Shared inner courtyard, accesseble from hallways and private front yards. Communual house only for residents that have bought a share

Figure 1. Description of the eight case studies. This article is based on more than 50 interviews with residents in eight newly built Danish high-rises with various kinds of shared spaces, functions, and facilities. Source: Translated and edited from Mechlenborg and Hauxner (2021, pp. 24–25).

Based on expert interviews, not included here, we categorized the shared spaces into three types:

- Necessary shared spaces such as corridors, lifts, stairs, and entrances. These shared spaces are needed either for safety reasons (like fire stairs) or as part of the building infrastructure (distribution halls, corridors, etc.).
- Housing support facilities offering amenities that would otherwise have been included in the dwelling or purchased outside, such as laundry facilities, guestrooms, open offices, and workshops.
- Social spaces related to facilities which are used for community activities and social events. In this category, we find shared living rooms, rooftop terraces, cafés, and communal spaces. These spaces are often organized by groups or residents or facilitated by housing organizations.

These three categories allow us to compare social practices across the eight high-rises and across households based on the type of ownership, age, gender, and socio-economic differences, though we recognize that all of these factors are dimensions of the production and consumption of social life (Kearns, 2012). Moreover, people have divergent perceptions of social life, and access to shared facilities does not necessarily indicate a high level of social life (Costello, 2005). To recognize this complexity, the study introduces two concepts related to social ideals in high-rises: "the hotel" and "the vertical village." These are treated as ideals in which residents' expectations of—and satisfaction with the level of social life in their building—are seen (see also Llewellyn, 2004).

At a hotel, comfort, privacy, and service are key concepts. This means that a dwelling in a high-rise building primarily functions as a place—a comfortable oasis—to which one can retreat and recharge—that is, to rest, sleep, and be oneself (Yuen et al., 2006). The concept of the retreat is linked to the idea that active social life takes place outside the building (Costello, 2005). It also means that the perception of one's neighbors is colored accordingly. In a hotel, guests respect each other's need for privacy and tranquility. Shared areas and facilities are experienced as representing the hotel's socio-economic status rather than as potential spaces for use (Costello, 2005). Hence, hotels are primarily a site for private activities and not a space for social contact between residents. Our understanding of the hotel typology draws from exclusive, high-end buildings in the US, Australia, and Asia (Gifford, 2007; Graham, 2016).

The vertical village as an ideal is historically rooted in modernist buildings exemplified by the Mark Twain Village in Chicago, in the US, from the 1930s, which contained common facilities such as an outdoor swimming pool, tennis court, supermarket, small shops on the ground floor, a bar and a sunroof at the top, laundry facilities, an indoor garage, and a welcome lobby (see, among others, Wekerle & Hall, 1972). The intention of the building was to enable residents to live together as in a village, without having to leave the premises for shopping, social activities, or cultural input (Llewellyn, 2004; Wekerle & Hall, 1972). In our interpretation, the vertical village is designed for residents who seek an active social life and strong community ties.

The hotel and the vertical village are both social ideals, and none of our high-rise cases is a pure example. However, we identified features of each type based on the way our cases had been developed and in relation to target groups, programming, accommodation, layout of common areas, and—not least—branding. We recognize the same features in residents' descriptions of their housing preferences and expectations in their descriptions of social satisfaction (Mechlenborg & Hauxner, 2021).

4.2. Interviews, Recruitment, and Thick Description

While this article focuses on more than 50 semi-structured interviews (between five and eight interviews in each building), the interviews are part of a much larger data set, including desk research of plans, visuals, diagrams, and marketing material (i.e., the building's brand); architectural analysis; and on-site observation of practices in shared spaces and facilities. In each case, we also interviewed between three and five professionals, including architects, contractors, planners, advisors, real estate agents, building operators, and people working in municipalities. However, in addition to the more than 50 interviews, only our observation notes and photos of the shared spaces in the buildings are considered here. Finally, this article only addresses social life and not the other themes that were part of the project.

All interviews were conducted as semi-structured interviews based on the same interview guide. Initially, a series of pilot interviews were conducted to test questions, structure, and themes. The interview guide included questions such as: What was your motivation for moving to a high-rise building? What are the advantages of living here? What are the disadvantages of living here? Do you use shared facilities and spaces, and if so, how? To better understand the links between residents' practices and expectations for social life, we initially asked them to rate their satisfaction with social life from 1 (the worst) to 5 (the best). We also added a question asking residents to describe their movements through the building—from their dwelling down to the ground level and outside—and what happens during their daily routines of leaving and arriving home, socially. This question turned out to be central to our understanding of how social practices and social spaces are linked, individually and collectively (see also Latham, 2012).

Although we strived for a representative recruitment of informants, our interviews were predominated by "case ambassadors"—that is, informants presenting their buildings in a positive light—most likely, because they as residents had invested time and resources in their dwelling and thus automatically attributed positive

properties to it (Blunt & Dowling, 2006; Després, 1991). Also, we found that living in a Danish high-rise is to a large extent an active housing choice for residents. This is especially true for buyers of owner-occupied homes in high-rise buildings, who also see it as an investment. However, we also heard from critical voices among the residents. An important task was to look beyond biased and subjective attitudes to identify general perceptions.

All interviews were subject to "thick description" (Ponterotto, 2006), through which a general narrative was produced and central quotes were selected and later categorized into themes and sub-themes. This means that quotes presented in the article are representatives of a larger data set. All informants in this article have been anonymized.

5. Findings: Residents' Social Lives in Danish High-Rises

5.1. Basic Social Recognition Is a Stepping-Stone

In the stories, residents told us, the physical space in front of their private doors was an intimate starting point for—or a barrier to—social contact. For some residents, greetings and small talk were enough, while others were keen to establish more personal relations. But being able to recognize one's close neighbors by face, name, and family form was generally described as an important part of one's housing quality. As a woman in the Five Sisters explained: "Of course, you need to know your neighbors—at least by face recognition. I mean, if anything happens, and you would be in need of help." Also, we talked to some residents who felt socially estranged when they left their dwellings. Their close neighbors were unfamiliar to them, and they did not exchange greetings when they passed each other, which—in some cases—had an effect not only on home attachment but on a fundamental feeling of belonging. A student in the Silo in Aalborg living on a floor with only youth housing told us: "I thought that living together with so many young people would automatically lead to a social life. But I only see somebody once or twice a week. I try to say hi but it's rarely somebody I know." Now she considered whether the comfort of her dwelling was enough to make her stay. Another example was a single, middle-aged woman living in Nordbro who had moved in as one of the first residents and had been looking forward to being part of a building that, according to the marketing material, was programmed for social life. She explained:

> In the beginning, we only lived five in the house. I first met someone around my age. I could well imagine doing something with her. We talked about that a bit. But I have not seen her since. I do not know where [which door] I should go and knock.

A few months after our interview, she told us that she had chosen to move. Neither of these two residents were able to create a suitable "intimate geography" that was comfortable and mentally manageable for enabling social contacts (Nethercote & Horne, 2016).

By contrast, residents that knew and talked to their neighbors and regularly met them in and outside the building were more likely to express satisfaction with their social life. The social ties on one's floor were also a natural steppingstone to practical, neighborly help, dialogue, and social activities, if desired. The following is from an interview with an older couple in the Silouette in Vejle: "We have a fantastic neighborhood on our floor. We know everybody. For Christmas, all our neighbors from the entire staircase are invited to our floor for Christmas fun. It's nice and everyone thinks it's nice." This indicates that social activities in the intimate space close to one's dwelling work as an entrance into social activities across floors. Conversely, not knowing your close neighbors and not having a regular routine with people that you recognize—and who recognize you—may prevent you from entering the larger community. As a young woman in Nordbro, Copenhagen, told us, she was not able to identify her neighbors, and this lack of social recognition was something she carried with her down the elevator and through the building with all the social facilities: "[I think] the reason why I haven't thrown myself into social activities is that I don't have any sense of who the others are."

We also met residents who did not express an interest in being part of social life, either on their floor or in the building. Based on our concept of "the hotel" as a social ideal, these residents mostly perceived their homes as private sites where they could withdraw from their work/the city/public life and be on their own (Després, 1991). In general, they rated their satisfaction with their social life in the building as high and told us they did not need more interaction. Some would make fun of neighbors who had asked them to join collective dinners or suggested social activities. One man living in Bohr's Tower joked about his neighbors, whom he claimed wished to "take their suburban lifestyle into the building." These residents felt it was good for the social life in the building that others had a social life, as long as they did not have to participate themselves. Also, their favorite kind of shared spaces tended to fall within the category of housing support facilities, such as fitness centers and guest rooms, which would increase their comfort level and quality of life rather than their social interaction (see Section 4.1).

However, several of these hotel-oriented residents also knew who was living on their floor, and they were able to recall their names and families and would greet them if they met them in the hall or the lift. In these cases, the social recognition was there, but mostly in relation to potential encounters to be avoided, as this quote from a father in Bohr's Tower suggests: "My son and I always joke when we take the elevator down. We hope it will not stop at any floors, so we can go down alone. But of course, if it does stop, we will be friendly." The point is that hotel-like residents do not seek anonymity

or total withdrawal from social encounters when living in high-rises in Denmark; they just avoid—deliberately or unintentionally—progressing from social recognition to social activities. Social recognition close to one's home is seen as an important aspect of home comfort.

5.2. Programming of Intimate Social Spaces

The establishment of basic social recognition shows how subtle material culture and social behavior are co-produced. As Modi (2014, p. 30) suggests, conventional tall buildings lack "semi-private spaces" that could "extend from the movement spines, such as corridors and elevator lobbies, forming a hierarchy of interactional spaces." Such spaces, she argues, would serve as alternatives to the front gardens of low-rise suburban areas. While recognizing the argument, our study also found that—especially in tall buildings with a high social density—the need for semi-private spaces is not only a matter of size, but a matter of texture, design, and residents' ability to personalize and domesticate these spaces (Després, 1991). In our study, some distribution areas were seen as impersonal, uninviting spaces with no reason to stay. These were described, variously, as "anonymous long hallways" with "heavy safety doors" made using "industrial materials" and having "no daylight" or personal attributes that indicated who lived behind the doors (from interviews with residents in Nordbro and AARhus). A resident of Nordbro tried to explain why she did not talk to her neighbors: "I think it has to do with the doors. There are so many doors that need to be opened and closed. It is difficult to find your way. I think we need more open spaces, where we are more likely to bump into each other." In the Silo, residents complained to the housing association because they did not like the interior design of the corridors. As one resident put it: "It was really bad in the beginning. Pure concrete and a cold expression. When they put carpet [on the floor], it helped. Now it is cozy."

Based on residents' stories, we identified several factors that affected their experience of the necessarily shared spaces close to their dwellings: (a) the number of dwellings on the floor or hallway, (b) residents' attitude toward the architectural style, (c) the size and accommodation of the room, and (d) the possibility of personal adaptation.

Personal adaptation was mentioned often as a sign of social invitation. For example, a sign with a family name on the door or benches, posters, and plants made the areas familiar. In some high-rises, residents were allowed to leave their strollers, shoes, and umbrellas in the hallways, which helped turn anonymous neighbors into lived lives with familiar faces. Families with children would recognize dwellings that also had children, and then knock on the door or wait to meet them in the lift, as a mother in Amaryllis House told us.

In the Five Sisters, several residents highlighted the small, square-shaped distribution room between their dwellings as the most important social space. The room had the same wooden floor with heating as in their own apartments, and only four apartments faced the room, making it warm, inviting, and pleasant to stay in. Many residents hung pictures on the walls and placed benches, plants, sculptures, or personal belongings here; these objects represented personal symbols of who they are while also creating a space for dialogue. As formulated by one resident, "It is warm here, the light is good, and the floor material is the same as in the homes—wooden floors. The hallway is like a living room." Several residents in the Five Sisters had also taken the initiative to decorate the entrance hall and corridors with plants, art, and information for residents to make it "homey," as one woman put it (see Figure 2).

Figure 2. Hallway, Five Sisters. Scale, material, and design can enable or hinder social interaction. Residents who are allowed to put personal stuff in the hallways find it socially inviting. Source: Mechlenborg and Hauxner (2021, p. 40).

According to Després (1991), an important dimension of homemaking is the ability to materialize one's personal values in one's surroundings, either in a phenomenological sense by maintenance, changing, adjusting, or renovating the physical setting (for example, DIY) or by adding personal attributes like photos, personal belongings, or children's drawings. While these practices are mostly linked to the study of private space, our study shows that residents in some high-rises conduct some of the same homey practices (Després, 1991).

5.3. Social Practices in Social Spaces and Housing Support Facilities

Based on our initial findings regarding a home-centered social life in our cases, we also investigated what effect this had on additional shared spaces, such as housing support facilities and social spaces (Figure 3).

According to our interviews and observations, housing support facilities were generally used individually and were often embedded in residents' daily routines. In general, such spaces were present both in high-rises branded as "vertical villages" for residents with high social expectations (such as AARhus, Nordbro, and Campus College) and in "hotels" for residents with low social expectations (such as Bohr's Tower).

In both cases, we found that these spaces were important mediators for informal social interactions between residents. Standing together in the postal area, spending time in the workspace, doing the laundry, or working in the shared open office encouraged people to interact. As we have seen with social interaction on the floor and in the infrastructure of the high-rises, however, this interaction involves an embedded ambiguity: For some residents, going to the shared parking lot or laundry facility was an exercise in avoiding social contact, without being unfriendly, however. For others, these spaces were potential platforms for conversations and social interaction, rather than mere workspaces. As a woman from the Silhouette told us, going to the laundry facility had a double purpose for her and her husband: "We go there to do our laundry, but also to meet people and to talk to those who are up for it." Quotes like these also indicate that it is socially accepted not to interact at a housing support facility, which underscores its potentiality.

Spaces for social activities and community events were mostly available in residential buildings branded as vertical villages. This was particularly the case in Nordbro and Campus College, two different high-rises with shared social spaces and facilities and branded as prioritizing social life and community commitment (see Figure 1). In Campus College, applicants were asked to submit a motivation application outlining how they wished to contribute to the community. In contrast to housing support facilities, we observed that social spaces generally did not appeal to individuals but were used by small groups—neighbors that already knew each other, households, or groups of friends. Alternatively, they were used by social committees or self-organized groups that planned events, social traditions, and activities for residents in the building, like carnivals, parties, communal dinners, and Christmas gatherings.

In some cases, the architects had worked strategically to break down the scale of the building into smaller social units by distributing the social spaces and housing support functions more evenly and even combining them. This was the case at Campus College, where a kitchen and living room were established on each floor in the common area by the elevator. This solution created several more intimate social spaces in which neighborhood contacts and housing support facilities were limited and horizontally organized. Residents at Campus College also told us that these horizontal social spaces meant that the building—despite more than 250 housing units—felt socially welcoming (Figure 4).

Compared to the social potentials of housing support facilities, we observed that organized social spaces were often organized or branded for specific target groups or lifestyles. Like the rooftop garden project in Amaryllis

Figure 3. Housing support functions. A fitness room in Nordbro, Copenhagen (left) and a workshop for senior residents at the Silhouette, Løgten (right). Housing support facilities can be used individually, but they also invite residents to interact due to the need for common usage guidelines. Source: Mechlenborg and Hauxner (2021, p. 129).

Figure 4. Horizontal social spaces. Floor plan of the Campus College's sixth floor. At Campus College, every floor has a shared kitchen and living room located in the distribution area next to the elevator in the core of the three residential areas with a total of 21 units. Source: Mechlenborg and Hauxner (2021, p. 45), with the courtesy of C. F. Møller Architects.

House, or the bar facilities at Nordbro, Copenhagen (Figure 5).

In Nordbro, the students and young people we spoke to were very happy with the bar facility, while the older residents did not feel it was for them and had stopped going there. One woman with a steady job, aged 30, told us she was very keen on having a social life; however, she felt that the facilities were not for her but for a younger age group. In AARhus, a high-rise with 255 units, planners had deliberately worked on creating a committed community for the few, rather than appealing to everyone, by offering residents to become shared owners of a common house. With this model, AARhus succeeded in getting those interested to take responsibility for the

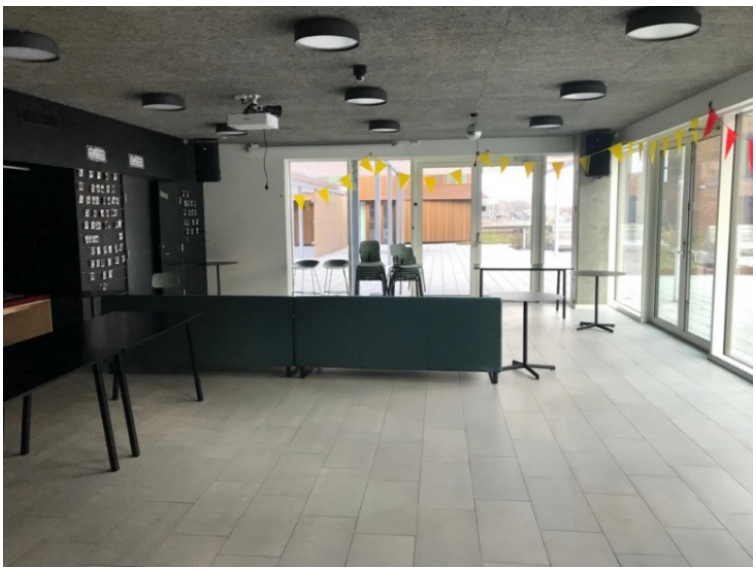


Figure 5. Bar for residential activities at Nordbro. While students and young people find these facilities fantastic, others feel excluded. This points to the importance of target groups and cohesion between lifestyle and shared facilities. Source: Mechlenborg and Hauxner (2021, p. 143).

community space. This indicates that while these social spaces are on the front stage of branding and marketing, they do not necessarily include residents who would like to join. Rather they require a deliberate action by residents (see also Generalova & Generalov, 2020) and a closer link between residents' lifestyles and the specific facilities, as Fincher (2007) also suggests in his study.

5.4. How Danish Skepticism Indirectly Inhabits Residents' Stories of Social Life

As Baxter (2017, p. 399) argues, home making is "a complex practical activity that involves the addition of material and imaginary dimensions to home." In general, we noticed that many residents in our study used the conventional Danish suburban way of life to explain differences and similarities when we asked them about their life in their high-rises, especially, when they talked about their balconies and access to light and fresh air, but also when explaining how they perceived social life. A significant portion of the residents we spoke to had personal experience with suburban living (empty-nesters and retired couples or singles), which could explain the comparison. However, residents that had only lived in cities or in apartments would sometime also use ideas about Danish suburban culture to underscore their point of view (such as the resident from Bohr's Tower who made fun of his neighbors' "suburban life").

In addition, residents did not automatically associate the high-rise building typology with their housing choices. They often referred to their buildings using other terms, such as a tower, house, multi-story building, or college, or they would call them by the name or nickname: "AARhus" or "Sisters" (the Five Sisters, Vejle). Even residents of Bohr's Tower and Nordbro in Copenhagen, both classic tall buildings with 29 to 30 floors, did not consistently associate their buildings with a high-rise typology. As a resident of Bohr's Tower answered when we asked if he considered himself to live in a high-rise: "No, I do not think I would say that. I would say I lived in a tower. The big tower." Similarly, a resident in Nordbro said, "I like to call it the tower at Norrebro station."

For some residents, the high-rise building typology was decidedly misleading. Some explained that they did not think their building's physical shape resembled a conventional high-rise building; this perspective dominated our interviews from AARhus and Amaryllis House and suggests a rethinking of the typology (see Figure 1). Others had never considered their building to be a high-rise. For many, the term "high-rise" either belonged to the infamous concrete social housing blocks of the 1960s or something found in large, international cities such as New York or Dubai. In both cases, high-rises were associated with social density and social isolation. A couple from Siloetten in Løgten, when we asked if they lived in a high-rise building, answered: "No. Here we have social clarity, and it is easy to get to know everyone." Many of the residents we spoke to, however, considered the building they lived in as a new type of construction, not necessarily affiliated with existing high-rises typologies, but with a re-thinking of Danish dwellings: "We wanted our new dwelling to be different, and it is. A bit like an adventure," a resident of the Five Sisters told us. This underscores how residents are more likely to experience their way of living, not from the position of an outside view or as part of a larger structure, but from the inside, through the perspective of home.

6. Conclusion: Social Practices Are Also Bound to Local Home Culture

From previous research, we know that social ties in high-rises are strongest on the floor level (Gifford, 2007). We also know that dwellings in high-rises enable residents to conduct vertical social practices (Baxter, 2017), and that building infrastructure like lifts and stairs, as well as balconies and walkways, can be seen as both personal and collective mediators of memories and social life (Arrigoitia, 2014; Shilon & Eizenberg, 2021). These studies suggest looking closely at the links between forms of bodily activities, forms of mental activities, spaces and facilities, and individual and collective actions. Thus, the recent ethnographic turn in high-rise studies emphasizes the need to better understand the complex ways in which vertical living, social life, and practices are entangled (Harris, 2015; Jacobs et al., 2007). Our study of social practices in contemporary Danish high-rises has used practice theory to investigate the social practices of residents (Schatzki, 1996). While focusing on individuals as carriers of practices, involving general understandings of home, social life, and—in this case—high-rise living from a Danish perspective, we have investigated how necessarily shared spaces, housing support facilities, and social spaces inform and influence these practices and vice versa (Welch & Warde, 2017). Based on our interviews and observations, we can summarize three main findings.

First, the article suggests that social life in Danish high-rises starts horizontally at the private front door. That is, social functions and community activities are not the main drivers in vertical neighborhoods, though they might contribute to strong social ties and interaction. The fundamental factor in building vertical neighborhoods—at least in Danish high-rises—is basic social recognition between neighbors living next to one another. Also, based on the stories we heard, social recognition—or the lack of it—outside your door is something you carry with you when you leave the horizontal space of your floor and move vertically up and down in the building's infrastructure and into additional shared spaces, such as when you do your laundry in the common facilities, pick up your mail, or meet residents at the workshop while fixing something that is broken in your home. Housing support facilities like these are individual platforms for potential social meetings that may lead to more active and committed social relations. The potentiality of

social life is key. Knowing one's close neighbors enables the possibility of more. This potential reflects individual needs and abilities to connect, according to the social ideals of the hotel (for people with a low interest in social activity) or the vertical village (for residents with a high interest in social contact). This means that social life is something that is home-centered and something that must be built up horizontally before it can become vertical (see Figure 6).

Second, recognizing that materiality (objects, spaces, and technology) informs and enables practices (Schatzki, 2016; Shove et al., 2012), our study investigated how different kinds of material, sizes, and designs affected residents' ability to perform social practices. Our study showed that the architectural design of necessary shared spaces, especially on each floor, was of major importance, especially in buildings with a high social density or with social spaces located far away from residential areas. In general, residents were able to identify whether these spaces felt inviting or uninviting for social interaction. Materials (e.g., carpets or concrete), decorations (e.g., panels, colors, and posters), size, and physical organization were all elements that—in combination with residents' tastes—contributed to or prevented social practices. In particular, material homemaking practices (Després, 1991), such as leaving one's stroller outside the door or decorating walls with personal items, were described as actions that humanized the space and mediated social activities.

Third, while social practices are mutually constructed by the material setting and actions (Shove, 2007), collective values and beliefs—conceptualized in practice theory as "general understandings"—also play a role (Welch & Warde, 2017). While some studies have identified a historically biased narrative involved in the planning of and research on high-rise living (Modi, 2014; Whitzman & Mizrachi, 2012), our study suggests that similar narratives also exist among the residents. The traditional Danish skepticism of high-rises and the common narrative of Denmark as a low-rise suburban nation to a significant extent dominated residents' stories, both negatively and positively. Despite their mixed feelings about low-rise housing areas as ideal for social life, all residents gave evasive answers in terms of recognizing their building as part of a high-rise typology. This indicates that general understandings also influence social practices and imaginary dimensions of home and social life.

Overall, our study shows that social life in Danish high-rises is enabled by different kinds of social spaces and routinized movements as a point of departure (see Figure 6). This also means that social life is not an activity that can be considered a practice in itself. On the contrary, sociality is performed while we carry out the diverse practices that make up our everyday lives (Shove, 2007). Based on the influential studies of Arrigoitia (2014), Baxter (2017), and others, we also recommend focusing on the affect and emotions related to materiality (design, size of space, and residents' material interactions), especially in the intimate spaces of necessary shared rooms and infrastructure that are part of residents' everyday routines, to further elaborate on vertical living and its implications for home. While recognizing that these ethnographic studies offer new details into "domestic verticalities" and homemaking in high-rises across cities and cultures, the present study has also aimed to emphasize common local beliefs and historically inherited ideals. Thus, our study indicates that homemaking and social practices are (also) something that bridge past and future traditions within a local culture. This suggests that future studies need

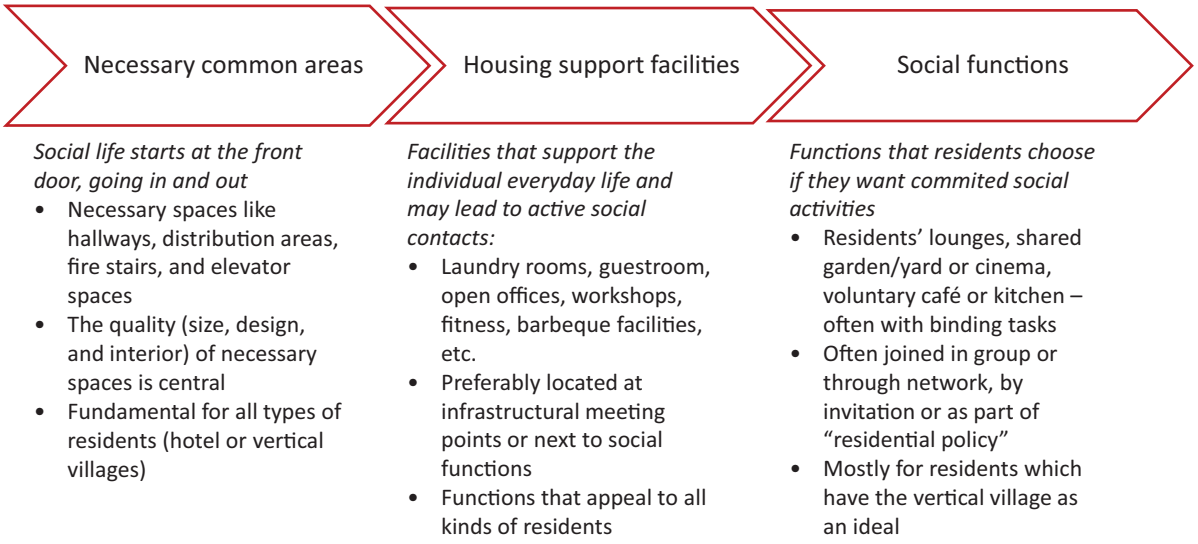


Figure 6. Steps in establishing vertical neighborhoods. This study shows that establishing vertical neighborhoods in Danish high-rises is deeply home-centered. Social practices start at the front door and are something you bring with you (or not). Housing support facilities make everyday life routines possible and are mediators of informal social interactions (second step). Social spaces are mostly for residents who expect a high level of community (third step).

to be sensitive to the ways local and national narratives of home and social life work both productively and counterproductively in social practices, including in high-rise buildings.

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Conflict of Interests

The author declares no conflict of interests.

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Article

Common Areas, Common Causes: Public Space in High-Rise Buildings During Covid-19

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Abstract
This article explores forms of public space that have been rendered palpable during the Covid-19 pandemic: public spaces in high-rise buildings. We consider both physical and social public space in this context, thinking about the safety of both common areas and amenities in buildings and the emergence of new publics around the conditions of tower living during the pandemic (particularly focusing on tenant struggles). We determine that the planning, use, maintenance, and social production of public space in high-rise buildings are topics of increasing concern and urgency and that the presence of public space in the vertical built forms and lifestyles proliferating in urban regions complicates common understandings of public space. We argue that the questions raised by the pandemic call upon us to reconsider the meanings of public space.

Keywords
amenities; Canada; common areas; Covid-19; high-rise buildings; public space; urban lifestyle; vertical living

Issue
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1. Introduction

Throughout the pandemic, public space has been spotlighted as an important part of urban everyday life: as (a) a *physical space* where urban inhabitants have had to implement distance between one another in the interest of public safety, which has not been safe or accessible for everyone, and (b) an important and contested *social space* where new ways of dwelling, gathering, and coming together have gradually taken shape. During the past two years, our interest has turned to how public space in high-rise buildings has been affected by the Covid-19 pandemic. We see high-rise buildings as places where unique configurations of shared space and spatial practices exist, yet thus far, there remains little research on this dimension of vertical living, and we align with scholars who suggest a need to better understand the spaces where vertical life takes place (Harris, 2015; Lehrer & March, 2019; March & Lehrer, 2019; Nethercote & Horne, 2016; Shilon & Eizenberg, 2021). We see the pandemic's impact on high-rises in Canadian cities as having rendered visible complex geographies of shared amenities and spaces and realms of collectivity and social encounter.

Public space is an important part of high-rise living, including both the physical spaces where publics take shape and more abstract space that emerges as a product of social relations between people. Elsewhere (March & Lehrer, 2019; Lehrer & March 2019), we have theorized that we must conceptualize public space differently in relation to verticality and vertical living, thinking beyond and unsettling an inadequate private-public binary. Instead, we must reconsider how publicness might apply in varying degrees to shared physical spaces both within and around buildings and be produced through people's social and spatial practices, perceptions, and imaginaries. We might consider forms of private/public "hybridity" (Nissen, 2008) to exist within

high-rise buildings. The response to Covid-19 in high-rise buildings has made these questions not just theoretically but increasingly practically salient as decision-makers have sought to implement appropriate public health measures in these spaces. We are especially interested in how these spaces have been impacted by the transformations and challenges wrought by the pandemic, as well as in what kinds of socially produced public spaces have emerged throughout it. The insights gained from this work have important implications for how planners and policymakers might meaningfully address existing problems within older towers and how they plan for liveability, safety, and well-being in the high-density, vertical neighbourhoods we continue to develop across Canadian cities.

In this article, we concentrate on these two different dimensions of public space in high-rise buildings. We examine shared spaces, detailing how public health guidelines have affected the use of amenities and common areas. We also examine emergent publics that have come about through shared struggles within high-rise buildings and around the conditions of tower living. This means that the public spaces we include here are not limited to formal shared spaces and amenities in buildings, but to a variety of spaces that are made public, both in and outside of buildings, through the struggles of tower residents. Here, public space is considered a multidimensional social product rather than simply in concrete terms. In particular, we touch upon cases in Ontario: the Keep Your Rent movement and Parkdale Organize in the Toronto neighbourhood of Parkdale, and tenant committee organizing related to the case of the Rebecca Towers in Hamilton, Ontario, where a large Covid-19 outbreak occurred in 2021. For us, these cases open windows into resident concerns about shared spaces, the social production of public space as a multidimensional entity (as explained in greater detail below), tactical use of shared spaces, and important emergent social spaces that constitute important topics for future inquiry.

In our analysis of policies and public health guidelines related to shared spaces, we focus on Canadian cities with concentrated presence of residential high-rise buildings and higher levels of concern, incidents, or outbreaks, and activism in high-rise settings during the pandemic. While we take a broader view, our case studies will be situated within the Greater Toronto Hamilton Area (GTHA), the region in southern Ontario where we live and work, which includes Toronto and Hamilton. It is important to note that circumstances in Canadian cities have differed across metropolitan regions and provinces throughout the pandemic; approaches have been heterogeneous and varied across time and place, largely due to public health being the jurisdiction of provincial governments, to a lack of coordination across provinces, and to differing contexts, circumstances, and levels of impact across cities (Cameron-Blake et al., 2021).

This article is organized into four sections. First, we outline our methodology, which applies a framework that is taking a Lefebvrian approach to the study of space. We then provide the context for our study, exploring the emergence of vertical living in Canadian cities and the importance of public space in high-rise towers. Then, we detail how Covid-19 sparked a series of policy decisions and the creation of place-specific regulatory frameworks related to safety and public health in high-rise buildings that speak to everyday life and spatial practices involved in vertical living. Our examination of public health measures in high-rise buildings in these different Canadian cities reveals similar concerns around the spread of Covid-19 and similar approaches to protect residents. Finally, we explore social struggles related to multi-family rental buildings in the GTHA. We conclude with a discussion about how the pandemic has transformed public space in high-rise buildings into a matter of increased importance and concern.

2. Context: High-Rises in Canadian Cities

The production of large-scale vertical housing *en masse* has given rise to new ways of living and a range of urban lifestyles. In one sense, we can see the emergence of high-rise living as bringing large numbers of people together in proximity and generating unique potential for creating community in towers. In another, we can see it as contributing to a kind of "capsular" society in which one's unit is one's fortress, and separation and hyper-individualization are key (De Cauter, 2004). Indeed, the development of modernist tower neighbourhoods was oriented towards "the remaking of people as well as environments" (Graham, 2016, p. 182), and more recent scholarship understands the verticality of the high-rise form as a force capable of powerfully shaping how residents live and producing unique affective experiences (Dorignon & Nethercote, 2021; Graham & Hewitt, 2013; Hadi et al., 2018; Shilon & Eizenberg, 2021).

In Canada, we have seen a number of different residential development booms that have resulted in the construction of high-rise buildings across cities. In this study, we define a high-rise as a building over six to 11 storeys tall, depending on local context and scale (official definitions vary across cities). Between 1962 and 1973, large numbers of multi-unit apartment buildings, usually in the form of large-scale elongated blocks, were constructed during a time of government support for large-scale mass housing projects of rental housing, and then again since the late 1990s using the condominium ownership structure (Statistics Canada, 2015). Across Toronto, Hamilton, Montreal, and Vancouver, there have been varied trajectories of high-rise development, with all but Montreal (where lower-scale apartment dwellings have historically been the most popular form) seeing widespread construction of this type during this period. Since this time, we have seen the gradual emergence of a particular urban landscape, altering the physical and social form of neighborhoods to what has been described as "condofication" (Lehrer & Wieditz, 2009)—

a process of transformation akin to new-build gentrification, followed by terms such as "condo-ism" (Rosen & Walks, 2014) and "condoization" (Lippert, 2020), capturing the particular ways in which Toronto has used more central urban development strategy prioritizing density and high-rise living. While the condominium refers to a particular ownership structure and not a built form, it is commonly associated with the shape of the tower and podium high-rise.

As verticality has become an important dimension of cities, our consideration of urbanity must now account for the complex spaces that high-rise buildings present (Graham, 2016; Lehrer & March, 2019; March & Lehrer, 2019; Panacci, 2012). High-rise towers harbour various forms of physical public space, such as shared amenities, common areas, and recreational facilities. Very little work has been conducted on the "ordinary vertical urbanisms" that are constituted by high-rise living (Baxter, 2017; Baxter & Lees, 2008; Nethercote & Horne, 2016), but even fewer studies have been conducted on how shared spaces, common elements, or public space fit into high-rise residents' spatial practices or everyday life. One study of shared spaces in disinvested public housing buildings suggests that they are important parts of residents' entangled "emotional ecosystems" and constitute affective "memory spaces" that are not only imbued with personal feelings such as anxiety and fear but are also connected to experiences of systemic injustice and neglect (Arrigoitia, 2014). In some cases, the shared spaces of buildings have been found to provide important opportunities for encounters and network-building between residents and important alternative social spaces (Ghosh, 2014; Lehrer, 2016). The dynamics of such spaces can also be complex and challenging, however, with issues around the shared use of facilities or restrictions on acceptable practices or behaviours that sometimes cause tensions among residents (Peters & Kesik, 2020). As we continue to build vertically across Canadian cities, the shared spaces and amenities high-rise buildings offer must be part of the discussion.

3. Methodology

In this study, we have examined how the pandemic has affected public space in high-rise towers in Canadian cities. Our conceptualization of public space is shaped by the thinking of urban theorist Henri Lefebvre (1991), who argues that space is not absolute but is socially constructed. In his thinking, there are three dimensions of space: conceived, perceived, and lived. Therefore, public space is not necessarily only those spaces that are labelled as such but also those where interactions of publicness are happening (Lehrer, 1998). Therefore, we argue that public space is rather a complex and multifaceted social product that reveals important power dynamics and is shaped through struggle. Given the unique circumstances that the pandemic produced, this is an excellent case to look at public space in new and context-specific ways.

Our examination has involved mixed methods, including policy analysis and a media review done between March 2020 and February 2022. We conducted a policy review that examined Covid-19 safety policies and procedures in high-rise buildings in four Canadian cities, Toronto, Hamilton, Montreal, and Vancouver. These cities were selected due to their higher incident reporting related to Covid-19 in local high-rise towers. We examined policies that had been enacted by municipal, provincial, and federal governments during this same time period, seeking, in particular, to understand how these policies addressed shared spaces in these buildings. We also conducted a review of 115 media articles published during this time period related to the implementation and enforcement of Covid-19-related protocols in the shared spaces of high-rise buildings in these cities. In our newspaper search, we combined keywords such as "public," "public space," "common areas," "shared spaces," and "amenities" with Boolean operators and terms such as "high-rise,'' "tower," "condominium," "apartment block" and "health measures," "protocols," "safety," "pandemic," and "Covid-19.'' Following this broader review, we focused on two case studies in Toronto and Hamilton which stood out in our media review, turning our attention to and conducting a close analysis of residents' spatial tactics and organizing practices related to shared spaces in high-rise buildings during the pandemic. These cases were selected due to the noticeably high levels of coverage they received in the media (based on the quantity of news articles). In regards to the Hamilton case study, we were especially interested as Covid-19 protocols were only enacted following—and we would argue largely as a result of—the organizing by tenants described below. We have monitored and analysed these struggles through textual material, mainly produced by residents and allies, including websites of organizations and material posted to social media and media releases between April 2020 and January 2022.

We concentrate on the tactics of members of the Keep Your Rent movement and Parkdale Organize, as well as residents of the Rebecca Towers and members of the Rebecca Towers Tenants Committee in Hamilton. We contrast the more "bottom-up" spatial tactics that socially produce public space and the emergent publics constituted by tower residents with the more "top-down" policies of different levels of government related to shared spaces in order to reveal very different ways that public space emerges as a matter of concern in the pandemic. Our exploratory work in this article constitutes preliminary research in a larger ongoing investigation into the impacts of Covid-19 on vertical living and shared spaces.

4. The Built Form: Shared Spaces and Amenities During Covid-19

During its first two years, the Covid-19 pandemic dramatically altered how urban dwellers went about their everyday lives. This has important implications for the

social production of space, which is lived and, to some extent, generated at the level of everyday life (see Lefebvre, 1991, 2014). The particularities of the pandemic's impacts have already been well-documented by scholars who, in cities around the world, sought to examine, document, and understand a shifty and uncertain "new normal." It immediately made palpable a range of already-existing social inequities, leading many such scholars to call for justice in planning and policymaking (see Jabareen & Eizenberg, 2021). Early in the pandemic, many predicted that Covid-19 would dramatically change how planners design space and infrastructure in cities to be safe and liveable, concentrating on public space as a central issue (Akers, 2020; Honey-Rosés et al., 2020; March & Lehrer, 2021). Public spaces became a central focus of governance, as decision-makers quickly moved to regulate behaviour through recommendations to physically distance, urging people to restrict social gatherings to outdoor spaces and permitting new activities and uses such as "pandemic pop-ups" (Flynn & Thorpe, 2021) in public places like streets or parks. These practices rendered visible spatial inequities and uneven spatial access of marginalized groups (March & Lehrer, 2021). Residential spaces also underwent major transformations in terms of use in the first year of the pandemic, as residents were ordered to "stay home" or "shelter in place" (an order that most frontline workers were unable to follow). Some argue that the public/private binary became especially blurred during this time, as many residents able to do so started to perform a multiplicity of tasks (work, shopping, exercise, attending social gatherings, visiting cultural spaces, etc.) from the seeming privacy of their residence (Valizadeh & Iranmanesh, 2022). Our article focuses on the particular circumstances that emerged in towers where many private residences are co-located.

Urban areas were hit hard by the pandemic. As the Covid-19 pandemic began in early 2020, attention was immediately directed to factors that might be helping the virus to spread. Crisis and catastrophe have, in other cases, led decision-makers to rethink planning and safety in towers, as high-rise buildings already played a central role in the transmission during the SARS epidemic of 2003 (Harris & Keil, 2008). In early 2020, many concerns were raised in the public discourse, specifically about the safety of shared spaces of high-rise buildings during this new crisis (Bozikovic, 2020; Lorinc, 2020). High-rises feature largely in an uneven geography of exposure, and studies have shown that, in Canadian cities, people living in high-rise apartments have had almost twice as high a mortality rate as those in detached houses (Yang & Aitken, 2021). There are a number of intersecting socio-economic reasons for this, but the built environment plays an important role. Crowded households were unable to practice physical distancing if a household member became ill (Maroko et al., 2020; Moos et al., 2020; Schellenberg & Fonberg, 2020; Yang & Aitken, 2021). High-rises also increase the risk of spread through the co-location of many residences in one building and through higher levels of potential contact with others in spaces that see heavy traffic, such as hallways or elevators (Bouffanais & Lim, 2020; Dietz et al., 2020; Lorinc, 2020).

The first presumed case of Covid-19 in Canada was reported in Toronto on January 25, 2020, with the first wave of cases experienced more intensely in Ontario and Quebec. From the outset, public health measures oriented towards the containment or slowing of the spread of illness were geographically varied (Cameron-Blake et al., 2021). Measures such as stay-at-home orders, school and workplace closures, restrictions on indoor dining, curfews, mask mandates, and vaccination policies have differed across both provinces and municipalities (Cameron-Blake et al., 2021). Our study of public spaces in high-rise buildings reveals similarity in approaches recommended across the cities of Toronto, Hamilton, Montreal, and Vancouver but also exposes inconsistency in how measures were legislated, whether they involved mandates or recommendations, and how they were applied in individual buildings.

Key shared spaces come to the fore through our examination. These include hallways, elevators, laundry facilities, foyers, stairwells, and shared amenity spaces such as gyms, pools, party rooms, gardens, and picnic areas. Within these settings, provincial public health officials deemed close contact between individuals to be a risk factor for community spread of the virus and recommended or mandated precautions, though applied with great variation across cities. In all cities, increased sanitation was added to many common areas, both in the form of hand-cleaning stations and cleaning regularly used parts of the built environment. Physical distancing was recommended, resulting in capacity limits being placed on many shared spaces. Restriction of use and access changed how residents were allowed to interact with the shared spaces of high-rise buildings. Some amenities were temporarily closed in buildings across all four cities. Residents were to be notified of these changes with publicly posted signs that would clearly state official public health recommendations (see Figure 1).

Masking was either mandated or recommended in all shared high-rise settings. In Toronto, municipal by-laws were passed that required the wearing of protective masks in enclosed, indoor public spaces in order to slow the spread of disease. The City of Toronto also ordered owners of apartment buildings and condominium corporations to put policies in place requiring masks in common areas. These policies were left in the hands of individual building owners and condo boards to oversee and enforce. The City of Hamilton legislated similarly with by-laws which required masks in common areas within multi-unit residential buildings. In Vancouver, the provincial government of British Columbia's mask mandate did not apply to the common areas of rental apartment buildings or strata corporations (condominiums), although wearing masks in such spaces was strongly

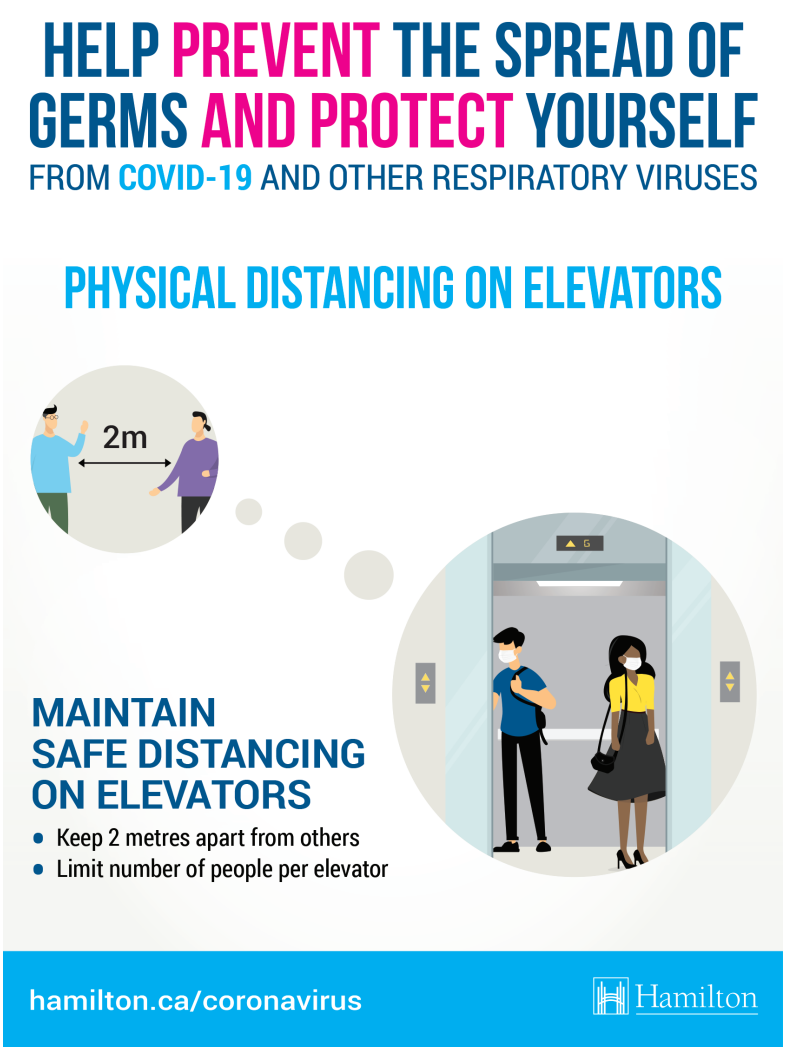

Figure 1. City of Hamilton public health recommendations poster. Source: City of Hamilton (2021).

recommended by public health officials. Quebec's mask mandate was also not applied to residential buildings, although public health authorities have recommended wearing masks. In Montreal, however, policy differed as Santé Montréal instructed building owners and condo boards to ensure that residents and guests wore masks in shared spaces.

Amidst all of the very particular recommendations and guidance around safety, in no case was it made clear how any measures would be enforced within buildings. For example, in Hamilton, enforcement was to be conducted by municipal by-law officers and public health officials—and non-compliance could result in a fine ranging from $750 to $100,000—but there was no procedure given for residents in the case that their building's management was not following guidelines. As we will see in the next section, measures were not strictly enforced in all high-rise buildings and were not enough to prevent residents' exposure to sickness and the emergence of outbreaks in buildings. We will also see that, when necessary, residents found innovative ways to work around rules in order to gather and collectively organize safely and appropriated shared spaces in important ways in circumstances where they sought to render the conditions of their everyday lives publicly visible and openly challenge those conditions.

An evaluation of how shared spaces in high-rise buildings in these cities were addressed during the pandemic reveals a potentially confounding area in terms of regulation, enforcement, governance, and safety. The media analysis that we conducted alongside our policy analysis also uncovered that some residential high-rise towers were harder hit than others during this time and that the recommendations implemented in top-down ways were not necessarily effective in protecting residents from the broader range of risks they were exposed to during this time. This highlights, for us, a strong need to see the spaces of high-rise buildings as shaped by social factors. As Pitter (2020) has pointed out, residents of the high-rise towers in the marginalized, disinvested, and "forgotten densities" of cities often live in substandard conditions in their private dwellings, lack access to outdoor spaces like balconies, and can become fearful of accessing shared spaces in buildings due to lack

of adequate safeguards and stronger risk of negative outcomes from Covid-19 infection as a result of compounded factors. The following section attends to particular experiences of the pandemic in residential rental apartment towers, highlighting the multifaceted issues residents have faced and how their struggles show a need to see differences in policymaking around towers and the shared spaces within them.

5. Emergent Publics in High-Rise Buildings

In this section, we shift to focus on the emergence of publics and socially produced public spaces in high-rise rental apartment towers during the pandemic. We briefly explore two examples from Ontario of tower residents organizing around high-rise issues which were exacerbated during the pandemic: housing security and housing safety. We look to the Keep Your Rent movement and Parkdale Organize, which saw tenants organize around rent strikes and anti-eviction efforts, and to the Covid-19 outbreak and post-outbreak activism that occurred in Hamilton's Rebecca Towers. These struggles stood out in our media analysis, revealing the importance of seeing public space in high-rise buildings not just in terms of physical space but in terms of social space. We also see the emergence of publics around particular issues in high-rise buildings as disclosing important differences across types of density during the pandemic—Here we underline, again, Pitter's (2020) characterization of "dominant" and "forgotten" densities. While the impact of Covid-19 may have limited access to and use of certain amenities or shared spaces in condominiums temporarily, this has been the case for many rental apartment buildings, where some amenities and shared spaces have long before the pandemic been inaccessible for a variety of reasons, with lack of maintenance being a key factor. The pandemic only intensified these issues while also catalyzing action on the part of tower residents, leading to tenant organizing around turning these into matters of public concern.

5.1. Rent Strikes and Anti-Eviction Organizing

During the first year of the pandemic, and especially in its first months when many workers experienced a disruption of employment, the question of rent payment became a major concern for many tower residents. Within days of the implementation of stay-at-home orders in Toronto, tenant advocates began raising alarms about potential risks to tenants. Even as government aid was announced, housing activists argued that programs like the Canadian Emergency Response Benefit would not adequately cover both rent and everyday costs of living in Toronto (Parkdale Organize, 2020). In the absence of other significant state interventions, precarious tenants, activists, and neighbours in high-rise buildings emerged as organizers, working together around shared concerns and threats.

An example of this has been the Keep Your Rent movement in Toronto, Ontario. Keep Your Rent is a tenant-led movement that emerged at the end of March 2020 to help tenants organize with their neighbours in order to protect one another from harassment or eviction and to collectively negotiate with landlords. It emerged from the already existing activism of Parkdale Organize, an organization of working-class residents in the downtown Toronto neighbourhood of Parkdale. Parkdale Organize had already been helping tenants in the neighbourhood to fight against renovictions, above-guideline rent increases, and poor management practices in buildings since as early as 2012 (Webber & Doherty, 2021). As the organization states: "Our neighbour's struggle is our struggle. What threatens our neighbours threatens our neighbourhood. When our neighbours are strong, our neighbourhood is strong. No one else is going to look out for us but each other" (Parkdale Organize, 2015). Organizing was undertaken at the neighbourhood level, with a focus on building solidarity within individual buildings. Rent strikes had already proven to be an effective tactic used against the large financialized landlords who own and manage the majority of the high-rise apartment buildings in the neighbourhood, with a streak of successful strikes occurring in individual apartment towers prior to the pandemic (Parkdale Organize, 2017; on the financialization of multi-unit apartments, see August & Walks, 2018). Such strikes were successful in large multi-unit buildings where many tenants could collectively withhold rent in solidarity with one another.

The organizing tactics promoted within Keep Your Rent worked well for residents in high-rise buildings. Because Covid-19 made it unsafe to go door to door or gather for in-person organizing, tenants were urged to use public spaces in and around their buildings to communicate with one another. Besides posting on streets around their buildings, Keep Your Rent encouraged tenants to post flyers and posters in their building's hallways, lobbies, or foyers and with that changed the usual function of these spaces as spaces of transition for individuals to spaces where the public could constitute itself inside of a building. Not unlike government-imposed safety measures, posters were made accessible online in PDF form for tenants to print out themselves (see Figure 2). These posters would help tenants to connect with one another and start communicating safely online, through messaging apps, and over the phone.

Tactics used within the movement to protect tenants have involved shared physical spaces within and around high-rise buildings. Prior to the pandemic, this was already common with Parkdale Organize; tenants organized meetings within building lobbies (Webber & Doherty, 2021). Lobby meetings were social spaces where residents could share experiences and information, organize, and collectively make decisions, building a movement around shared struggles around their housing (Webber & Doherty, 2021). While the pandemic

Figure 2. *Keep Your Rent* poster by artist Patterson Hodgson. Source: Keep Your Rent (2020).

made lobby meetings less possible due to constraints on the use of indoor shared spaces, this did not stop tenants from organizing collectively. Once it was safe to gather in person, in-person meetings, press conferences, or community gatherings took place in the public spaces adjacent to buildings, such as lawn areas or semi-public squares. In the Parkdale neighbourhood, these spaces often constitute transitional spaces between the street and high-rise buildings themselves and presented a space for engagement with the broader public as well, conveying messages about and generating interest in the issues of tower residents within buildings.

As the pandemic continued, Parkdale Organize and Keep Your Rent activists got involved even further with the emerging and ongoing issue of evictions. While in Ontario, a temporary eviction moratorium was implemented by the provincial government, tenants and activists expressed concerns about such a measure merely postponing an eventual wave of evictions. In fact, at the same time, tenants continued to receive eviction forms from landlords seeking to remove renters during the moratorium. Again, here activists urged tenants receiving eviction notices to immediately let their neighbours know and organize collectively. Neighbours and supporters of the movement mobilized, protesting outside of landlords' homes, confronting property management companies at their offices, and showing up in groups during evictions by enforcement officers. Websites such as EvictionsOntario enabled tenants facing possible eviction to share the locations of their buildings and connect with neighbours online. Tenants and allies also showed up *en masse* for online Zoom hearings at the Ontario Landlord Tenant Board (LTB) to witness processes and demonstrate solidarity with tenants facing eviction. While organizations like EvictionsOntario (2021b) have argued that video format eviction hearings have favoured landlords who have more resources to participate effectively, the online format of LTB hearings did briefly also produce another grey space in terms of publicness, as a broader public were able to attend the hearings from home, showing up in solidarity for tenants. Activists and community members live-tweeted the goings-on at these LTB hearings, providing the broader public glimpses into the injustices of the often-invisible eviction process as the LTB undertook what housing advocates, quoting LTB adjudicator Dale Whitmore, termed an "eviction blitz" between November 2020 and January 2021 (EvictionsOntario, 2021a). This work of tenant movement building and organizing is ongoing, and it demonstrates how individual private matters in high-rise buildings become public through organizing within those tower buildings and linking them to the wider housing struggle and its activists.

5.2. Outbreak Organizing

In the spring of 2021, during the lengthy second wave of the Covid-19 pandemic in Ontario, a large-scale outbreak occurred in an apartment building in Hamilton. At 235 Rebecca Street, Rebecca Towers is a centrally located 17-storey apartment building containing 164 units, owned and operated by Toronto-based developer and property management company Medallion Corporation, one of many financialized landlords operating within the GTHA. On May 4, the City of Hamilton declared an outbreak in the building after 55 positive cases and one death were identified in the building. In all, 107 residents and three staff contracted the virus.

The problems that emerged in this building reflect problems of poor maintenance and upkeep that have been observed in older high-rise apartment buildings throughout the GTHA beyond the context of the pandemic (March & Lehrer, 2019; Risager, 2021; United Way Greater Toronto, 2011; United Way Greater Toronto et al., 2021). Tenants in the Rebecca Towers argued that their landlords had failed to maintain the building's ventilation system, failed to promote regular cleaning and maintenance practices, and failed to safely and adequately staff the building for upkeep. According to residents, shared spaces like laundry rooms, hallways, or elevators tended to be crowded, unsafe, and unsanitized. Tenants characterized the building as "a high-rise death chamber" (RebeccaTowersTenants, 2021), arguing that "all of us are experiencing some form of physical, emotional, and psychological distress. We are living in constant fear of sickness and death" (RebeccaTowersTenants, 2021). In early May 2021, as the tower outbreak worsened, desperate tenants displayed messages on the sides of the building, hanging signs from balconies scrawled on paper or on bedsheets reading "Help us!" or "Please save us from this petri dish."

Prior to the outbreak, tenants in the building had already reached out for support from tenant advocates with experience in organizing and pursuing to form a tenant committee in the building because Medallion Corporation was seeking above guideline increases of 3% for rent in the building. This, and a range of long-standing issues regarding building maintenance, formed the initial bases for tenants coming together. As tenant advocate, housing scholar, and neighbour Emily Power notes (2021), when the outbreak began, relationships had already been established within the building, and so tenants were prepared to face the situation together:

> They were ready to pool resources, to pay for PPE and get groceries for people in isolation, they were more ready to push as a committee to demand that the City of Hamilton bring a mobile vaccine clinic to the building, they were more ready to push for the landlord to make both elevators operational, to improve the cleaning in the building, to improve the ventilation in the building. (Power, 2021)

Tenants demanded regular sanitization of shared spaces, repairs to the elevators, increased staffing, and improved ventilation.

Because residents spoke out, door-to-door testing was also arranged in early May so that residents who were isolating could be assessed in the midst of the outbreak. Through the organizing of tenants, on May 16th, 2021, a door-to-door Covid-19 vaccination clinic successfully vaccinated 86 tenants and 28 of the building's neighbours (RebeccaTowersTenants, 2021). The tenant committee played a large role in the success of these efforts, designing and distributing posters and flyers in several different languages and arranging drop-in vaccinations for tenants who were afraid or unable to leave their units during the outbreak.

The organizing, however, was not limited to merely addressing the outbreak and very quickly shifted the conversation to the topic of building maintenance. The case of the Rebecca Towers demonstrates how tenants organized collectively around the shared spaces of buildings while also using them in their organizing, turning private but public-facing elements of the building such as balconies into message-boards decrying the state of affairs inside the building and calling for action from Medallion Corporation. Tenants displayed signage on the building demanding "REPAIRS NOW!" and declaring "TENANT POWER." Press conferences and rallies were held in front of the building. While repairs had long been needed in the building, the Covid-19 outbreak that occurred in the building brought widespread public attention to these issues, making the demands of the building's tenant committee visible. Residents also corresponded extensively with the news media, sending photographs of the damage, unmaintained units, broken amenities, and dirt and infestations inside the building to the media. The circulating photographs revealed years of neglect to the interiors of the tower and effectively turned the private spaces of residents' everyday lives into matters of public concern. Tenants successfully directed critical attention to the negligence of their landlord, Medallion Corporation.

In July, after the outbreak dissipated, the City of Hamilton implemented the Covid-19 safety requirements in high-rise apartment buildings and condo towers of 12 storeys or more. During the wave of the pandemic that sparked this decision, 225 reported cases of Covid-19 had been concentrated in three different high-rise apartment towers. The organizing of high-rise tenants, including the residents of Rebecca Towers and members of broader tenant networks, is largely responsible for these changes.

6. Conclusion

The pandemic directs our attention towards the particularities of verticality as a contemporary urban lived experience and towards specific matters of concern in vertical living. During the pandemic, the shared spaces of high-rise buildings have become key sites of policy

intervention, but further, our examination spotlights the importance of shared physical spaces in the lives of high-rise residents and sheds light on how such spaces are utilized in the everyday and tactically made public in organizing practices. Perhaps most notably, we have seen Covid-19 give rise to important forms of spatial production within high-rise buildings, as residents have sought to make their lives more manageable, make their struggles known, gain access to important services, and keep one another safe from a variety of risks that were intensified by the pandemic. Shared spaces are both catalytic and practical sites of convergence for collectivity and organizing around the conditions of vertical living. We see the spatial practices and actions of tenants in high-rise buildings as being potentially useful to tenants engaging in movement building in other cities. As tenant movements grow, network, and share experiences with one another, we anticipate that tactics will travel. These movements render visible the conditions of everyday vertical living, making aspects of verticality public.

We see this exploratory study as spotlighting a matter of concern and opening up further avenues of inquiry into shared spaces in high-rise buildings and the dynamics and politics of public space in relation to verticality and vertical living. We find this to be true not only in regards to safety within the built environment but in regards to social spaces and the safety they make possible. In particular, we see a stronger appreciation for the socially produced nature of public spaces in planning and policymaking as being an important factor in creating not only safer but more equitable and just places to live.

Where the built environment is concerned, in exploring policies and new pathways of study, we urge the consideration of difference with regards to densities, forms of high-rise dwelling, and conditions of inhabitation and vertical living. Outbreaks in some tower neighbourhoods were clearly driven by intersectional factors—Many high-rise apartment buildings are populated by working-class tenants and frontline workers who have been unable to work from home, towers contain many overcrowded households where isolation has been difficult or impossible, and unmaintained buildings present tenants with higher levels of risk. In this regard, Covid-19 revealed stark inequities that already existed before the pandemic. In future studies of public space and high-rise buildings, we suggest further inquiry into differences between high-rise forms and deeper qualitative investigations into the nuanced ways particular shared spaces fit into the everyday lives of residents.

We already see research being conducted into the kinds of renovations, building improvements, and new design features that will be necessary to create safer indoor spaces for tower residents (Safarik & Miranda, 2020). Long-term solutions will be needed if we are to try to safely "live with the virus," as some now insist we should. For tower residents, living with Covid-19 clearly presents vastly different challenges than it does for residents of other housing forms. Many conversations have turned to how shared spaces can be made safe. As they play important roles in the everyday lives of tower residents, we suggest that planners, designers, and architects must consider ongoing safety in contexts of contagion going forward, potentially adding features for improved ventilation or creating space for physical distancing in particular areas of residential high-rise buildings, and strongly considering how spaces around buildings can be made more accessible in equitable ways to tower residents. Planning initiatives must also listen to the emerging publics of the vertical city. Tower residents must be consulted in planning processes, if not engaged in more meaningful processes of co-design where new buildings or major renovations are concerned. We hope that, following the calls of high-rise tenants, safety will also include risks *beyond* contagion, taking into account long-needed repairs, maintenance, and upgrades that Covid-19 has made more visible to the broader public, as well as questions such as tenant precarity and tenant rights in the face of multi-layered crises that in Canadian cities include the affordable housing crisis, eviction and renoviction crisis, and homelessness crisis. We hope to see meaningful policy action around these issues beyond the short-term emergency measures and restrictions on usage that have thus far characterized the policy response to Covid-19 in high-rise buildings.

Finally, we see this crisis as also revealing the need to see public space in complex and multifaceted ways. As we stated at the beginning, we used a Lefebvrian approach, which means that any space is socially constructed through and with the three lenses of conceived, perceived, and lived. This allows us to see public space evolving in moments where private space changes into public space and where an individual issue becomes a collective issue. Therefore, we see the Covid-19 pandemic's effects on the world of high-rise buildings as having underlined how public space must be understood as something that exceeds the private/public binary through which it has often been understood. We comprehend high-rise buildings as revealing unique grey areas of publicness around which different publics, made up of residents, allies, and housing advocates coalesce and where governance, policy, and collective interests are at play. This tells us that we need to further consider and complicate the meanings of public space and further engage with its particular manifestations in contemporary vertical living.

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Conflict of Interests

The authors declare no conflict of interests.

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Article

Urban Verticality Shaped by a Vertical Terrain: Lessons From Chongqing, China

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Abstract
Urban studies have long been predominantly flat without a vertical dimension. This horizontal hegemony is partly embedded in the fact that many cities throughout the world, especially the centres of knowledge production, are plain cities. This article argues that even narrowing down urban verticality to high-rise buildings is still a product of horizontal hegemony. This article uses the city of Chongqing in China's mountainous southwest as an example, to extend the understanding of urban verticality beyond high-rise buildings. By investigating three vertical urban projects, namely, the Raffles City, Hongyadong, and the Mountain City Footpath system, the article reveals how vertical terrain, as a vertical element, shapes Chongqing's urban planning, urban governance strategy, and people's experience in the city. As a counter experience to horizontal urbanism, verticality both constitutes part of local people's ordinary living experience and a spectacular experience for outsiders, which has been mobilised by the local government for place-making and city branding.

Keywords
China; Chongqing; Hongyadong; Mountain City Footpath; mountainous; Raffles City; terrain; urban verticality; vertical city

Issue
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1. Introduction

In recent years, there has been a call in urban studies for "stronger theorizations of verticality" (Scott, 2008, p. 1858). High-rise building, a typical mode of vertical urban development, has long been a defining characteristic of modern cities, as exemplified by Downtown and Midtown New York more than 100 years ago. In the past two decades or so, more high-rise buildings, including skyscrapers, have been mushrooming not only in metropolises in developed countries but also in many countries in the Global South. Located in Dubai, the United Arab Emirates, Burj Khalif Tower, the world's tallest building, exceeds 800 m in height. This is perhaps why vertical urban development has caught increasing academic attention. High-rise buildings have been explored from different perspectives, such as their political economy (Nethercote, 2018), their cultural meanings (Bunnell, 1999), their contribution to vertical gentrification (Graham, 2015), and the living experience inside them (Shilon & Eizenberg, 2021).

Undoubtedly, high-rise building is an arresting mode of verticality. Focusing on high-rise buildings alone, nevertheless, may limit the scope of our imagination of urban verticality/verticalities. Some researchers have explored other vertical qualities of contemporary urbanisation to extend our vertical scope, such as satellite maps for civic use (Graham & Hewitt, 2012) and the deployment of drones in the name of securing the urban skies (Shaw, 2017). Even so, urban verticality shaped by mountainous terrain—which can be found in many cities, such as Hong Kong in Asia, Lisbon in Europe, and Rio de Janeiro in South America—has not so far attracted wide attention. As argued by Graham and Hewitt (2012), the analysis of contemporary urban space is still dominated by "a notable horizontalism," leading to the long negligence of vertical dimensions. Limiting urban verticality to high-rise buildings may further reflect the dominance

of horizontalism, or what I call "horizontal hegemony," in that high-rise building is the most common vertical movement in major cities that are mainly flat. For mountainous cities like Hong Kong, the terrain not only creates high density full of high-rise buildings but also leads to a more diverse interplay between urban architecture and the terrain, turning the city from vertical to volumetric (Shelton et al., 2011), which contains multiple grounds at different levels (see also McNeill, 2020).

In this article, I use the case of Chongqing, a city in Western China, to contest my notion of "horizontal hegemony" and explore how the experience of a mountainous city could extend our understanding of urban verticality. Chongqing is a metropolis located in a mountainous region with millions of inhabitants. At the different stages of Chongqing's urbanisation, the varied interplay between the terrain and human constructions has generated different modes of verticality: High-rise buildings can be used and experienced in new ways, while some urban infrastructure without much vertical-*ness*, such as stairs and alleys, may gain new vertical functions, either for the everyday experience of local citizens or for tourists encouraged to visit by the city government.

This article uses the cases of Raffles City Chongqing, Hongyadong, and the Mountain City Footpath system to illustrate the diverse urban verticalities in Chongqing. The article is based on some fieldwork that I conducted intermittently in Chongqing in 2019 and 2020. The research methods I used are mainly qualitative, including site visiting, interviews with local citizens and other professionals, and document analysis. The number of people I could interview in Chongqing was limited due to the travel restrictions following the outbreak of the Covid-19 pandemic. Therefore, some follow-up interviews had to be replaced by further document analysis in order to enhance the reliability of the data. The documents I collected include planning documents, news reports, and other relevant evidence on social media. Since the experience of urban verticality is a critical part of this research, some descriptions are based on the physical and sensorial experiences of Chongqing's citizens and mine, which may reveal a phenomenological research approach.

The remaining part of this article contains six sections. I first review the literature on urban verticality and the basis on which we might extend our vertical scope. This section is followed by a brief introduction to the way in which the mountainous terrain shapes Chongqing's urban development. Then, I use the three cases listed above to illustrate the different modes of urban verticality in Chongqing. The article concludes with reflections on the limitations of the study and suggestions for further research.

2. Urban Verticality Beyond High-Rise Buildings

With high-rise residential buildings springing up in Western Europe, North America, and Australia after the Global Financial Crisis, vertical urbanisation has caught more academic attention in recent years. In terms of the boom of high-rise residential buildings, scholars turn to Harvey's (1982) concept of "spatial fix," in which the "secondary circuit of capital," or the built environment sector, could absorb surplus capital generated by the commodity production sector, to unravel the underlying politico-economic mechanism (Craggs, 2018; Nethercote, 2018, 2019). For example, following Harvey's idea, Nethercote (2018) coins the term "vertical housing fix" to highlight two functions of high-rise housing in the circulation of capital; namely, it serves as (a) a labour- and capital-intensive commodity, which can provide jobs, boost demand for construction materials and durable goods, and absorb financial capital, and (b) as an investment on the internationalised real estate markets that attracts worldwide investments from diverse sources. Furthermore, it functions as a cultural artefact for making distinctions, which differentiates cities according to levels and social classes. Nethercote (2019) further uses the case of Melbourne, which has witnessed a dramatic vertical expansion in the wake of the Global Financial Crisis, to illustrate the politico-economic mechanism. In Melbourne, high-rise construction projects, with the help of the state, not only fuelled the local economy and increased state revenue but also helped Melbourne gain a powerful image around the world of its skyline full of newly built skyscrapers.

In fact, high-rise residential building is not a newly emerging phenomenon in the post-crisis era. Between the 1930s and the 1970s, guided by modernism in architecture, Western cities witnessed a boom in high-rise residential buildings, predominantly social housing (Graham, 2015; Urban, 2012). The recent boom is more of a trend towards "elite takeovers of the urban skies" (Graham, 2015, p. 627). High-rise buildings created secure living spaces, or "vertical gated communities" in Graham's (2015, p. 628) terms, in a living style which has long been stigmatised as insecure (see Slater, 2018). Other scholars have investigated the living experience in high-rise social housing in Western metropolises (Baxter, 2017; Ghosh, 2014). It is true that living in these buildings may be associated with violence, crime, and danger, but the shared space, mutual aid, and communal practices can also strengthen the ties between the residents and provide them with a feeling of home. In addition, scrutinising the actual living experience in high-rise buildings beyond the politico-economic mechanism also provides a more nuanced understanding of what living high really means for the residents within (Baxter, 2017; Shilon & Eizenberg, 2021). According to Baxter (2017, pp. 344–345), vertical living may provide residents with new views, a sense of self-isolation from the crowded world, or a feeling of "spatial extension towards the horizon," which are distinct from any experience on the ground.

Beyond Western cities, in Asia, including China, high-rise buildings, including residential buildings, are

even more common than they are in cities in the West due to the high population density and the late urbanisation in Asia. As described by Shin (2011), in East Asian cities like Seoul and Hong Kong, far from reaching the central business district from the airport, visitors may find endless strings of high-rise clustered buildings (see also Yuen & Yeh, 2010). Shin (2011) uses the term "vertical accumulation" to designate the politico-economic dynamics of such a phenomenon. According to Shin (2011), the driving forces of vertical development in Asian cities are (a) the acquisition of property-related revenues, (b) strong developmental states, and (c) the prominence of real-estate capital built on speculative home-ownership aspirations. In addition, an ambition to catch up with or reach a stage of national development to be recognised by the rest of the world also underlies vertical urban development. In fact, since 1998, buildings in Asia (Petronas in Kuala Lumpur first, then Taipei 101 in 2004, and followed by Burj Khalifa in Dubai in 2010) have replaced the former World Trade Centre in New York City as the world's tallest building. Now, 17 of the tallest 20 buildings throughout the world are in Asia (nine in Mainland China; Emporis, 2022b). Bunnell (1999) and Acuto (2010) have respectively explored the cultural and social meanings of Petronas and other spectacular skyscrapers in Dubai. According to Acuto (2010), using the "vertical" architectural language of the West, namely, the highest skyscrapers, Asian cities like Dubai could prove their commitment to development and progress and confirm their positions in the world (see also McNeill, 2005).

In general, existing research has uncovered much of the political economy, living experience, and cultural and social meanings of vertical urbanisation. However, one thing we may need to note is that all the vertical examples addressed here are skyscrapers and high-rise buildings. As stated in the introduction, it may be true that vertical buildings are the first things that come to mind when we think of urban verticality. However, as discussed by Graham and Hewitt (2012), urban verticality/verticalities can be conceived beyond skyscrapers, to include the "God's eye" equipped by Google Earth to provide satellite views from the air, the vertical urban surveillance made possible by drones, and the subterranean facilities for security and other purposes. What constrains our vertical imaginations is what I call "horizontal hegemony." It has long been debated that there is a "flat ontology" in human geography (Collinge, 2006). For Graham and Hewitt (2012), a notable horizontalism still dominates the analyses of contemporary urban space. One possible reason is that most of the centres of knowledge production throughout the world are large cities that are flat or mostly flat, be they London, Paris, New York City, Tokyo, Shanghai, or Singapore. It is reasonable to suppose that plains are preferable sites for city construction. The most conspicuous vertical things in these flat cities are skyscrapers, high-rise buildings, or high towers, equally. In this regard, although verticality has been strongly theorised following Scott's (2008) call, it is still dominated by an innate horizontalism, or a "horizontal hegemony," as illustrated by the lopsided attention paid to high-rise buildings. Hong Kong may be a possible exception. As a mountainous city with limited land resources, Hong Kong has developed in an extremely dense way, with the largest number of high-rise buildings anywhere in the world. Urban verticality in Hong Kong is manifested in the complex systems of vertical infrastructure intertwined with the terrain. To some extent, Hong Kong has become so volumetric that the vertical dimension intersects closely with the horizontal dimension (Bruyns et al., 2021; Shelton et al., 2011; Wang, 2020). In the present article, drawing from Robinson's (2006, p. 1) criticism that "much urban theory, which has taken its primary inspiration from cities in the West and which has tended to privilege certain experiences of these places" and existing research on urban verticality, I use the urban experience of Chongqing, a mountainous metropolis in China's Southwest, to extend the understanding of urban verticality beyond the "horizontal hegemony." I argue that the terrain, or mountainous terrain, in particular, is an important dimension when we try to understand urban verticalities. High-rise buildings and skyscrapers do matter for urban verticality; indeed, their intersection with mountainous terrain can shape a specific mode of everyday urban experience. Such experience may also be partly shared by the citizens of Hong Kong, Lisbon, San Francisco, Rio de Janeiro, and many other mountainous cities. Urban verticality in the mode of terrain may pose challenges to the planning of many infrastructures. In the meantime, it can also be utilised by the government to promote local identity and create a spectacle for those visitors living under the "horizontal hegemony." In its argument, this article seeks to demonstrate that urban verticality is not merely a form but is embedded in the process of urban space production and the everyday experience of citizens.

3. Chongqing: Vertical Terrain as the Basis of a City

Chongqing, along with Beijing, Shanghai, and Tianjin, is one of the four provincial-level municipalities under the direct administration of the central government in China, and the only one inland. Within China's mountainous Southwest, the region where Chongqing is located, or the Parallel Canyon in Eastern Sichuan, is extremely rugged. The terrain here is shaped by interlacing ridges and valleys from the northeast to the southwest. The city centre of Chongqing is in a valley between the Tongluo Mountain-Nanshan Mountain to the east, and the Zhongliang Mountain to the west (see Figure 1), with many hills and slopes inside.

Despite the disadvantageous terrain, Chongqing occupies an advantageous location as it is where the Yangtze River is joined by its largest tributary in the Sichuan Basin, the Jialing River. Benefiting from such a location, Chongqing has long been a transportation hub

Figure 1. Chongqing city centre and its surrounding terrain.

and became the first treaty port in Southwest China in 1891. In the recent century, the mountainous terrain has surprisingly brought Chongqing several profound opportunities for its development. During the Second Sino-Japanese War (1937–1945), Chongqing was picked as the wartime capital of China by the Kuomintang government in that it was located far away from the war front in the east and was well protected against military attacks by the surrounding mountains. Numerous factories and enterprises evacuated from Eastern China were relocated to Chongqing, transforming this city into a significant political, economic, and industrial centre (see Han & Wang, 2001). Following a similar principle, in the 1960s and 1970s, the Communist leadership in China initiated the Third Front Construction for war preparation and once again conducted the relocation of factories to the mountainous inland, with Chongqing as the centre (see Meyskens, 2020; Naughton, 1988). Entering the new century, to balance the uneven domestic development, the central government in China initiated the Great Western Development and channelled more resources to the Western inland. Chongqing, which was upscaled to be a provincial-level municipality in 1997, thus gained more development opportunities (see Bao et al., 2019). According to Smith (2022), some of Chongqing's practices even become the precursors to the Belt and Road Initiative, now well-known throughout the world. Now, Chongqing has grown to be one of the largest metropolises in China, with a population of more than 10 million in its urban core and 32 million in the entire municipality it administers.

The tension between the mountainous terrain and the intense land demand of such a populous metropolis has forced Chongqing to be highly vertical in both upward and downward directions in its urban land use. For one thing, to connect different parts of the city divided by rivers and mountains together, Chongqing has constructed a wide range of vertical traffic infrastructure, including long-span bridges, tunnels, cable cars, and even escalators and lifts. For another, to intensify land use, tall buildings (high-rises and skyscrapers) or built on the higher slopes and hills have long been common in the city. According to the statistics provided by Emporis (2022a), Chongqing has 298 skyscrapers (above 100 m) and 1,594 high-rise buildings (35–100 m), ranking 15th among the cities with the most skyscrapers in the world and the sixth in mainland China (see Figure 2). Some cities ranking higher than Chongqing, such as Hong Kong, ranking number one, and Guiyang, ranking number 14, have similar terrain to Chongqing's.

The interplay between the mountainous terrain in Chongqing and its diverse vertical infrastructure has produced a creative urban experience. Interacting with urban verticalities, such as climbing up slopes and stairs, or using elevators and escalators as means of public transportation, is part of local citizens' everyday practices. But for outsiders, the mundane urban verticality may constitute a novel experience, or become "weird," as suggested by Roast (2022). The best-known case may be the Liziba Monorail Station. Line 2 of Chongqing Rail Transit (or CRT2), a monorail, started its operation in 2004. It was the first metro line in use in Western China. The starting section of CRT2 runs halfway up the hills along the southern bank of the Jialing River. Liziba Station is a typical transit-oriented development construction of 19 storeys. Its ground floor lies on the bank of the river, while the station is located on the sixth to eighth floors of the building. The lower part of the building is for commercial use, and the upper part is for residential use. Passengers can reach the station either by climbing the six floors from the riverbank, or directly from the sixth floor if they live higher up the hills. Looking up from the riverbank, the moment when a monorail enters the station becomes a spectacle as the train runs through

Figure 2. Part of Chongqing's skyline, with many high-rise buildings and bridges across the river.

the building and has even become a tourist attraction (see Figure 3).

Another famous example of an everyday vertical landscape becoming a spectacle is a residential complex called Baixiangju (see Figure 4). Built in 1993, Baixiangju is located on the slope of the north bank of the Yangtze River. It contains six blocks, which rise to the same height. To fit the sloped terrain, the different blocks have unequal numbers of storeys. The block closest to the riverbank is as high as 24 storeys, while further up the slope, the block has only 10 storeys above street level. The blocks are connected by a long corridor with sky bridges. Residents can enter this building by the entrance at ground level by the riverbank, through a gate on the 10th floor halfway up the slope, or by an entrance on the 15th floor leading from the main road at the top of the slope. Such a design takes great advantage of the terrain and avoids using a lift, which in the 1990s was a luxury facility seldom used in China's residential buildings.

In Chongqing, Baixiangju is not a rare case. Due to the mountainous terrain, the residential buildings in Chongqing have made creative use of the terrain from as far back as the 1980s to meet the housing demands of the large population. Many high-rise buildings with no

Figure 3. Liziba Station, with a train arriving.

Figure 4. Baixiangju residential complex.

lifts in the city centre of Chongqing, similar to Baixiangju, have two or even more entrances on different storeys, each leading to different streets on different levels. Residents can choose any entrance, depending on where they are and where their flats lie. This mode provides the staircases of these buildings with a unique function. In most cities, the staircases in residential buildings lead to one direction only. A staircase is, to some extent, a private space that is exclusively used by residents of the building. It is also common for a building to turn itself into a "gated building" by adding a gate to its entrance to prevent strangers from getting in. In Chongqing, however, the staircases of high-rise buildings with several entrances can serve as public spaces. Pedestrians not residing within the building but with local knowledge can also use the staircase within a residential building if they want to climb up or descend from one entrance to another, namely, from one street level to another street level, to avoid a detour or bad weather. The everyday experience of Chongqing citizens shaped by the verticality of the city thus becomes, to some extent, unique.

4. Raffles City Chongqing: Controversial Skyscrapers in a Vertical City

For a vertical city like Chongqing, some common urban verticality, such as skyscrapers, may be experienced in more divergent than other cities exhibit. Raffles City may be the best case. Completed in 2019, Raffles City Chongqing is located right at the confluence of the Yangtze River and the Jialing River (see Figure 5, left). It is a commercial complex made up of eight skyscrapers, of which the two main buildings in the front, with a height of 356 m, are so far the highest skyscrapers in Chongqing. With a total investment of 24 billion RMB yuan (approximately 3.5 billion US dollars), this complex is the largest Singaporean investment project in China, developed by the well-known real estate developer CapitaLand (2022a). It may not be a coincidence that in 2015, three years after its construction began, Chongqing was selected as the site of the China–Singapore Demonstration Initiative on Strategic Connectivity, which is the third inter-governmental cooperation project between China and Singapore, after Suzhou Industrial Park and Tianjin Eco-City, and the first one in Western China (see Smith, 2022). This project set up a display hall on the ground floor of Raffles City Chongqing.

Raffles City is undoubtedly a new instance of "WOW architecture" (see Acuto, 2010, p. 276) in Chongqing. It was designed by Moshe Safdie, a prestigious architect who also designed Marina Bay Sands, the new landmark of Singapore. It is no wonder that the two buildings share the same structure of a giant horizontal sky bridge that links the top of several skyscrapers (see Figure 5). According to CapitaLand, its design drew inspiration from sails to symbolise Chongqing's long history as a hub of waterway transportation. Furthermore, located at the site of the former Chaotian Gate (literally, "facing the sky") of Chongqing city, Raffles City Chongqing also conveys the auspicious idea of sailing toward the sky or a bright future of surging growth (CapitaLand, 2022b). In terms of its internal space, Raffles City claims to represent Chongqing's mountainous characteristics by vertically integrating multiple functions into itself, including consumption, commercial space, residence, and transportation ("Chongqing laifushi zhengshi," 2021).

Raffles City Chongqing, however, became controversial even before its completion. As Roast (2022) reveals, it has become weird for local citizens. The first critique

Figure 5. Raffles City Chongqing (left) and Marina Bay Sands, Singapore (right).

of this project contends that its gigantic scale failed to maintain a good relationship with its surroundings. As introduced above, to alleviate the land shortage in this mountainous city, high-rise buildings, including residential buildings, have been introduced into Chongqing in creative ways for many years. Even the sky bridge, as an arresting design in Raffles City, finds something similar in existing buildings like Baixiangju. But other high-rise buildings, especially those built earlier, seem to have been designed in a more careful way in terms of their relations with their surroundings or even creatively use the terrain to vertically extend their function, as noted above. In a news report, Mr Chen, the former chief architect of Chongqing Architectural Design Institute, criticised such a design because "from the perspective of the urban landscape, buildings ought to rise gradually from the riverbank up to the hills, adapting to and integrating with the terrain and nature. It should be vertical and multi-layered" (Liu, 2018). Raffles City, the highest skyscraper in Chongqing, is located at the lowest point of Chongqing's city centre, where the two rivers join here. Its gigantic scale may overwhelm the buildings and traffic nearby and block the view of Chongqing's city centre (see Figure 6, left). As Mr Chen complained:

> From different angles, these buildings overlap with each other, almost in an airtight way. This is very bad in the visual sense….If we adopt a specific perspective from the confluence, there may be some gaps. But from most perspectives, there are no gaps at all. The urban landscape of the entire city centre has been shielded. With its rise, there is a stronger feeling of being blocked. (Liu, 2018)

Mr Chen's critique is quite representative. Similar opinions can be found on local online discussion boards and social media. In 2019, an assessment of the ugliest architecture in China initiated by an architectural website with several architects ranked Raffles City Chongqing in the first place as the ugliest building in its year in that "it savagely tramples on the historical heritage of Chongqing and brutally damages the scale of a mountainous city." (Archcy, 2019) When I was conducting field observation in Chongqing in 2020, I once, by chance, encountered a middle-aged woman who was waiting at a bus stop facing Raffles City; she complained, quite unprompted, "This is really too ugly." Whether this is a reluctant attitude toward a new architectural complex in the city or a short-sighted resistance to its unforeseen bright future, it represents the unwelcoming attitude of many Chongqing citizens to this skyscraper complex.

A further critique of Raffles City Chongqing stems from the cultural and historical significance of Chaotian Gate, the site where Raffles City stands. Chaotian Gate, demolished in 1927, was once the largest entrance from the port through the wall of Chongqing city. In 2015, before the construction of Raffles City, a section of the ancient city wall, which dates back to the Southern Song Dynasty (1127–1279), was found by archaeologists right next to the site of the former Chaotian Gate ("Zhucheng shouduan," 2015). In this regard, the verticality of Chongqing as a historical city extends not only upwards but downwards. How to preserve this section of the ancient city wall, and whether the name of Chaotian Gate would be replaced by Raffles City caused fierce debates among local historians and heritage enthusiasts (see, for example, Han, 2017; He, 2017). A very serious critique even targeted CapitaLand directly as foreign capital and Singapore as its cultural background. It stated:

> CapitaLand, as a representative of Singaporean culture, failed to understand Chinese culture and the human history of Chongqing. It blindly transplanted a copycat design to Chongqing, which has damaged the feelings of Chongqing citizens. (Hexun, 2018)

The appeals of Chongqing citizens achieved a partial success. An archaic-looking new Chaotian Gate will be built in the space between Raffles City and the river (Li & Wang, 2021). The section of the ancient city wall has

Figure 6. Street blocked by Raffles City (left) and the ancient city wall underneath it (right).

been preserved in a vertical way under an affiliated structure of Raffles City (see Figure 6, right). In the words of the leader of a local heritage enthusiast community whom I interviewed, the city wall is preserved in a "humiliating way," being fully overshadowed by Raffles City (Interview, 26–11–2020), which represents the lasting angry opposition to the newly built skyscrapers.

5. Hongyadong: The Vertical Gentrification of Everyday Landscape and Its Rediscovery

Whereas the engagement of Raffles City Chongqing is transnational, Hongyadong is a more local project developed by Cygnet, a hot pot restaurant group based in Chongqing. Hongyadong is an 11-storey commercial complex, located on the bank of the Jialing River and leaning against a steep slope. Like other high-rise buildings in Chongqing as described above, Hongyadong has two entrances, one on the first storey, leading to an avenue along the riverbank, and another on the 11th storey, leading to the main street at the top of the slope. On each floor are many restaurants, mostly with local features.

The development of Hongyadong is a process that can be called the gentrification of everyday landscapes. The name of Hongyadong has remained unchanged since the redevelopment. In the first sense, Hongyadong, as a steep slope, used to be a dilapidated neighbourhood, whose majority of residents were porters and other manual labourers. The redevelopment of this neighbourhood has relocated such residents and replaced them with consumers with higher consumption capacity. This is a typical process of "new-build gentrification" in the Chinese context (see He, 2010; Shin, 2016). In the second sense, the development of Hongyadong also involves the *spectaclisation* of the everyday landscape, especially that of people with lower social-economic status, depriving it of its original functions and appropriating it for consumption purposes. According to Mrs He Yongzhi, the boss of Cygnet, Hongyadong drew its inspiration from the traditional architecture in Chongqing (Shu, 2020). In Chongqing, single- or multi-storeyed buildings used to be clustered densely on different levels of the same slope. Viewed from afar (especially across the river), the buildings on the slope constitute a unique vertical landscape with multiple layers, which is more commonly associated with disadvantaged social groups. The new development of Hongyadong piles up these layers vertically and integrates them into a massive complex (see Figure 7). Aesthetically, the new development of Hongyadong does keep some features of traditional architecture in Chongqing to arouse a certain nostalgia. Such a design, however, turns the everyday landscape into a spectacle, or in other words, *spectaclises* the everyday landscape of relatively poor social groups, represents it with new materials (concrete rather than bricks and wood) and provides it with brand new functions, particularly for people with higher social-economic status. This process is what I mean by the gentrification of the everyday landscape.

For Hongyadong, now a new landmark of Chongqing, its business success is not a straightforward story. According to a report, in its early years, the monthly loss of this project could reach as much as several million RMB yuan (Shu, 2020). One possible reason, according to a Chongqing interviewee, is that Chongqing citizens are so familiar with this vertical architectural style that they

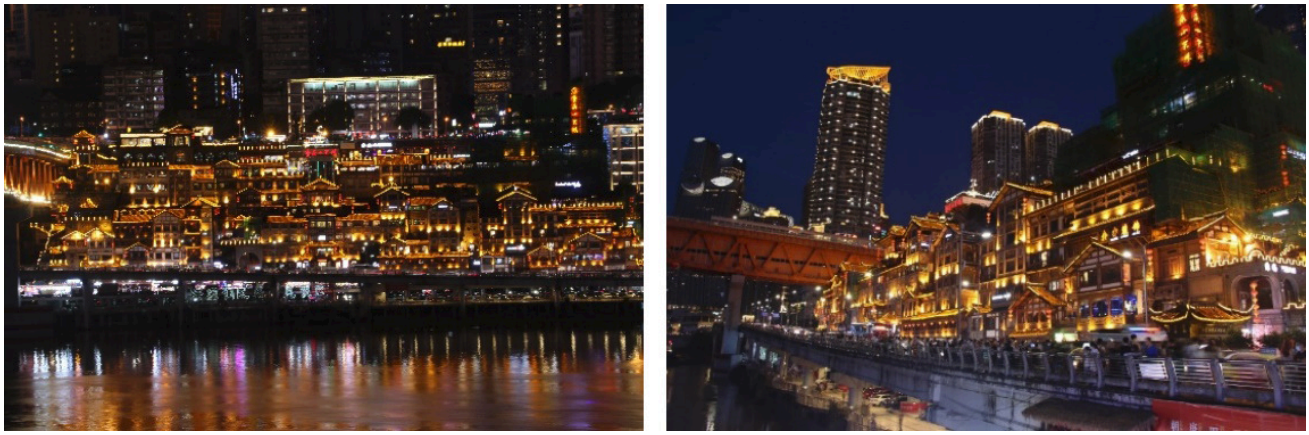

Figure 7. Hongyadong: View from the northern bank (left) and the southern bank (right) of the Jialing River.

did not find any novelty in it (Interview, 20–06–2020). Constrained in Chongqing, it could hardly reach its potential consumers.

The rediscovery of Hongyadong started around 2016, owing to the boom of new social media that shares short videos, particularly TikTok. Later in 2018, some people even found Hongyadong resembling a scene in the famous Japanese cartoon film *Spirited Away*. Its unique vertical structure, along with the deliberately designed light, makes it an eye-catching "cyberpunk" landscape on the internet. According to an earlier statistic in 2021, in the Chinese version of TikTok (Douyin), videos under the hashtag Hongyadong have been viewed 630 million times (1.02 billion times in 2022), far surpassing other traditional tourist attractions in Chongqing (Ouyang, 2021). Online attention has also been translated into actual tourist visits. In 2019, Chongqing recorded 657 million tourists, ranking first among all Chinese cities ("Chongqing 2020 lüyouye," 2020). Social media has facilitated the further *spectaclisation* of Hongyadong and helped it reach its target consumers.

Verticality may lie at the core of the popularity of Hongyadong. As discussed in the literature review section, a kind of "horizontal hegemony" has shaped the urban experience of most citizens living in cities with "flat" terrain. Their sense of urban verticality may be limited to high-rise buildings, or, at most, the underground transportation system. The vertical landscape of Chongqing and other mountainous cities constitutes a unique spatiality for them. It would be interesting to enter the Hongyadong complex from its top on the 11th storey, walk all the way down, and eventually arrive at another street level. By adding light, sound, and smell to the vertical setting, Hongyadong successfully created an "affective atmosphere" (see Wang & Li, 2018) for visitors to physically experience the vertical spectacle. In this regard, Hongyadong, which has only 11 storeys, may extend outsiders' urban experience and spatial imagination further than a skyscraper of several hundred metres. Although Hongyadong is a gentrified landscape that has been deprived of the original social and economic meaning associated with its landscape, it is still a miniature of the verticality of Chongqing. Hongyadong seems to be a story of high-rises as spectacles (see Nethercote, 2018, p. 673), but in a somewhat different way.

6. Mountainous City Footpath: New Infrastructure to Experience Everyday Verticality

A final example of the diverse verticality in Chongqing that I introduce in this article is the Mountainous City Footpath. Footpaths and trails in cities and suburbs have existed for a long time. For example, in Hong Kong, several long-distance trails, including the famous MacLehose Trail, were developed more than 40 years ago (Cheung & Wong, 2022). But only in recent years has this infrastructure caught the attention of urban officials and planners in mainland China. Chongqing, with its initial plan for the Mountainous City Footpath system first raised in 2003 ("Shirenda tongguo," 2003), became a pioneer in introducing footpaths into China.

In Chongqing, conditioned by the mountainous terrain, walking has long been the dominant means of transportation, and it is rare to find many bicycles in use. According to the Chongqing Institute of Transportation Planning and Research, for Chongqing citizens, walking and using non-motor vehicles accounted for 43.6% of all modes of transportation in 2018 (Cao et al., 2019). As discussed above, in Chongqing, many residential buildings, old and new, are built on different levels of slopes. In addition to motorways that meander on the slopes, these levels are also connected by stairs within buildings, as explained earlier, and/or alleys with many staircases as shortcuts. Some residential buildings along these alleys can be accessed only on foot (see Figure 8). These buildings are undoubtedly unfriendly for vehicle transportation. Residents may also encounter trouble if they are disabled or need to move bulky goods. However, this has long been part of the city's everyday life as a mountainous metropolis with a profound shortage of land. The mountainous terrain with many stair alleys has generated a need for porters, or *bangbang* (sticks) in the

local vocabulary. These labourers hang goods on each end of a stick and shoulder it to move goods up and down the stairs. Even today, with the rapid development of vehicle transportation, there is still a need for such a service in Chongqing. These alleys with stairs, along with motorways, constitute a complex network of vertical transportation in Chongqing.

The Mountainous City Footpath system is a somewhat romanticised version of the existing vertical transportation network, which Chongqing seeks to incorporate into its strategies of city branding. Originally, the Mountainous City Footpath appeared as part of the design of the city image for Chongqing's city centre ("Shirenda tongguo," 2003), which aimed to showcase the unique "footpath culture" of this city, as well as provide convenience for citizens and beautify the urban landscape. The first nine footpaths were broadly based on existing stair alleys in Chongqing's old neighbourhoods (see Figure 8). Qiansi Gate-Huguang Guild Hall Footpath, completed in 2007, is a good example (see Figure 9). This footpath, which is not far from Hongyadong, was transformed from the 200-m-long track of a former funicular linking the southern bank of the Jialing River with a street up a hill. It is still a humble structure that prioritises functional usage, decorated only by the two cable cars that operated on the track.

When Chongqing decided to make its urban verticality a more important element of city branding, as illustrated by the success of Hongyadong, the Mountainous City Footpath system also gained new meaning. As stated by the *Chongqing Daily* in one of its reports on the Mountainous City Footpath:

> As a megacity, Chongqing has three types of footpath: alley footpaths, riverside footpaths and forest footpaths. Individual footpaths within each type are diverse with many mutations. Following the changes of the terrain, they are interwoven into a complex network. *Such a system in Chongqing is highly distinctive throughout the world*. (Cao et al., 2019, p. 3, emphasis added)

Being endowed with new significance, the footpaths in Chongqing have extended considerably. According to the Municipal Government of Chongqing, by 2019, the number of footpaths in the Mountainous City Footpath system had reached 60, covering a total distance of 1,209 km. In the following four years, the municipal government planned to build 17 more footpaths, adding 353 kilometres. The municipal government put forward a long-term vision of another 43 footpaths, adding 854 km in total, to extend this system to more than 2,000 km (Chongqing Municipal Government, 2019). In terms of the practical design of the footpaths, more functions beyond daily use were envisaged, such as facilitating urban regeneration, linking tourist attractions, and

Figure 8. An alley in Chongqing with stairs and some residential buildings beside it, now part of the third path of the Mountainous City Footpath.

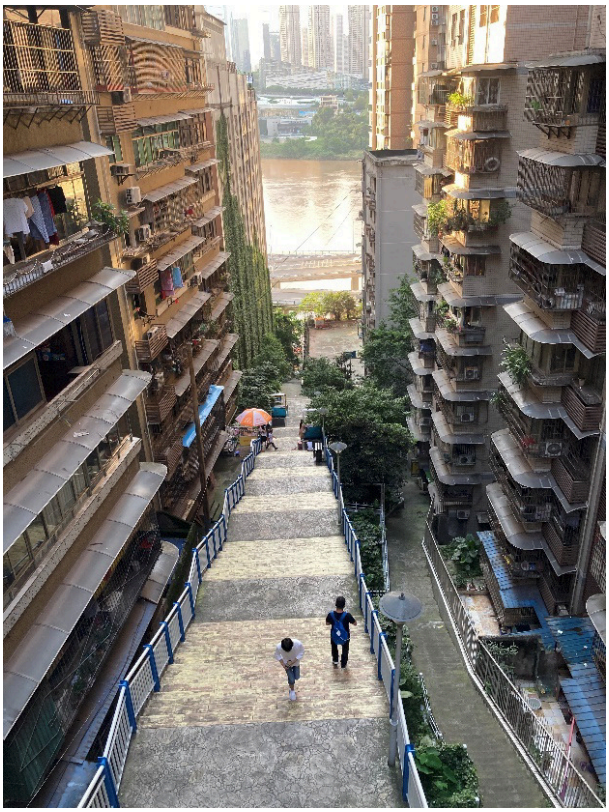

Figure 9. Qiansi Gate–Huguang Guild Hall footpath.

encouraging the operation of guesthouses and centres of cultural creativity (Chongqing Municipal Government, 2019). In general, the Municipal Government wants to establish a new infrastructure that could meet the everyday needs of local citizens and simultaneously serve as vertical spectacles and amenities for tourists.

Shancheng Alley (Mountainous City Alley) best epitomizes the extended role of footpaths in Chongqing. Among the first batch of footpaths, Shancheng Alley is a section of the third footpath. It combines several old alleys on the slope by the northern bank of the Yangtze River with some newly built structures, including a plank road along the cliff by the river (see Figure 10, left). Shancheng Alley used to be an ordinary flight of steps in the city centre of Chongqing, with quite a few residents living in some dilapidated dwellings alongside. Since 2018, the neighbourhood of Shancheng Alley has experienced dramatic renewal, although the state media in China still calls it "minor regeneration" ("Dang bainian," 2022). Most of the former residents have been resettled in other districts. Their dwellings, as well as some historic buildings along this alley, were renovated (or even rebuilt) in the style of Chongqing's traditional architecture (see Figure 10, right) and converted for commercial use. A local resident whom I interviewed attributed this transformation to the success of Hongyadong (Interview, 19–11–2020). The success of Hongyadong convinced investors that a vertical urban landscape and the old architectural style had the potential to attract more visitors with higher consumption capability.

Shancheng Alley is still being used by Chongqing citizens as an ordinary vertical facility in their everyday life, although the regeneration, or gentrification process has forced some former residents out. Whether or not Shancheng Alley will achieve its predicted success is yet to be seen against the background of the long-lasting pandemic in China, but as with Hongyadong, Shancheng Alley provides us with a possible example of the way in which, due to Chongqing's terrain and the political economy of urban development, the vertical urban experience, which is an "incidental product" (Roast, 2022), could be a novel spectacle consciously produced by the local government for people in thrall to "horizontal hegemony," and could extend their urban experience.

7. Conclusion

The verticality of Chongqing, as discussed in this article, is closely engaged with the mountainous terrain of this city. It shapes the everyday experience of all its citizens. High-rise buildings and skyscrapers are incontrovertibly part of Chongqing's verticality, but they are intertwined with the mountainous terrain and thus yield new ways of being used. In contrast, skyscrapers that fail to take the terrain into serious enough consideration in their design, such as the gigantic Raffles City, may incur contestation. One city's mundane everyday verticality, however, can be a novel urban experience for outsiders dominated by the "horizontal hegemony." As part of the city branding strategy, the everyday vertical landscape, or newly built landscapes following their style, can be further exploited by the city government to cater to the need of outsiders who are visiting for the sake of the novel spectacle, as shown in the cases of Hongyadong and the Mountainous City Footpath system. This is understandable in today's fierce inter-city competition and urban entrepreneurialism.

This article is mostly an initial step to the further investigation of Chongqing's urban verticality. Conditioned by the lockdown and travel restrictions due to the Covid-19 pandemic, I found it impossible to conduct a large sample survey or more interviews to assess Chongqing citizens' experiences and attitudes to the verticality of Chongqing, which would have enabled me to triangulate the findings with secondary sources. Meanwhile, the voices of government officials, planning professionals, and social activists are also needed to deepen the discussion of the politico-economic mechanism associated with Chongqing's urban verticality. If the vertical experience of Chongqing and many other cities

Figure 10. Shancheng Alley: The plank road section (left) and the section with renovated buildings (right).

like it can extend the scope of urban verticality, urban planning and urban governance may tackle further questions, such as the circumstances in which cycling could be promoted as a healthy way of urban life, how far the mobility of the disabled and the elderly can be secured in a vertical city, and whether the action of climbing stairs, as part of the urban experience in a vertical city, could be replaced by vertical escalators as in some parts of Hong Kong. All these questions remain to be explored within and beyond the context of Chongqing to further challenge the horizontal hegemony and lay the ground for a new vertical epistemology of cities.

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Conflict of Interests

The author declares no conflict of interests.

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