

# International Conference on Urban Planning



ICUP2025

PROCEEDINGS  
Serbia, Niš, April 10-11, 2025



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urban planning cluster niš





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## COOKIE-CUTTER SUBURBS OR IS THE COPY-PASTE HOUSING REALLY HUMAN?

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### ABSTRACT

*Cookie-cutter suburbs, also known as tract housing, represent a planning model widely implemented across the globe, particularly in suburban areas of cities experiencing significant urban growth and the resulting demand for affordable housing. The mass construction of uniform residential neighbourhoods emerged as a popular approach in the latter half of the 20th century in United States and Canada, later spreading to other countries. This model facilitated the rapid, efficient, and relatively inexpensive provision of housing for large populations.*

*From an architectural perspective, the development of such large-scale neighbourhoods presents numerous challenges, including a lack of individuality, the monotony of form, limited spatial flexibility, and various environmental issues. The aim of this paper is to explore, through the analysis of selected case studies of cookie-cutter suburbs to determine whether these developments, despite their negative architectural attributes, offer specific advantages for residents.*

**Keywords:** *suburbanization, cookie-cutter housing, tract housing, suburbs, mass-produced housing, individuality.*

### 1. INTRODUCTION

The second half of the twentieth century witnessed the extensive development of residential neighborhoods characterized by the repetitive use of identical architectural housing models. These neighborhoods initially emerged as suburban extensions of major cities in the aftermath of World War II, primarily in response to the growing demand for affordable housing. However, what began as a solution to affordability and diverse buyer needs gradually evolved into a widespread form of low-density urban typology, extending across various nations. This type of suburbia has come to be synonymous with uniform residential blocks, often referred to as "cookie-cutter suburbs" or "tract housing." By definition, this urban planning model entails the creation of residential neighborhoods through a process where a developer or builder acquires a large parcel of land, subdivides it into smaller plots, and constructs multiple identical or similar homes in a repetitive manner, resulting in a homogeneous residential area (Levittown, 2024). Over recent decades, this approach to suburban development has faced considerable criticism from experts, particularly due to the socio-psychological and spatial implications it has on its inhabitants.

Nevertheless, despite such criticisms, suburban areas continue to expand as extensions of metropolitan centers or as entirely new, planned urban developments in various regions worldwide. This ongoing trend raises an important question: does this model of urban planning contribute to fostering a sense of community, identity, and human-centered spaces?

This research aims to explore the phenomenon of suburbia and cookie-cutter housing developments through selected case studies from different regions globally. The primary objective of the study is to assess whether this suburban urban planning model results in a living environment that is truly humane and conducive to a positive quality of life.

## 2. RESEARCH METHODOLOGY

The research methodology employed for analyzing the spatial form of cookie-cutter settlements is grounded in the analysis and synthesis of numerous case studies. Alongside these methods, techniques such as generalization, concretization, and specialization were utilized, with comparison serving as an integrative approach. The study draws on both inductive and deductive reasoning, selecting five characteristic examples for in-depth analysis. These case studies were chosen based on their distinct features and geographical locations. The selection criterion for the global locations aims to demonstrate that this form of settlement develops under diverse conditions across various continents. The first case study is Levittown, USA, which is widely regarded as the first modern example of tract housing in the world. The second case study is Irvine, California, a more recent suburban model located near Los Angeles. The third example is Mississauga, Ontario, Canada, one of the largest suburban developments in the country. The fourth case study is Craigieburn, Melbourne, a suburban settlement in Australia. Finally, the fifth example is Jumeirah Park, a relatively recent development in the United Arab Emirates, showcasing a modern iteration of tract housing in the past decade.

The analysis of these case studies aims to highlight the urban planning and architectural characteristics of each settlement, providing a foundation for evaluating the extent to which this housing model addresses human needs and contributes to the creation of a humane living environment.

## 3. THE DEVELOPMENT OF SUBURBIA AND COOKIE-CUTTER SETTLEMENTS

Suburbs, like cities, are significant and complex public spaces deeply intertwined with economic and social processes. The suburbanization of cities, as a typological form of urbanization, originated in the United States and Great Britain, with its roots traceable to around 1815 (Jackson, 1987). The rise of a new, affluent social class, alongside the advent of tram transportation, prompted the urban bourgeoisie to seek residence closer to nature, away from the pollution and challenges of industrial cities (Mace, 2009). As a result, the wealthiest households moved from the urban core to the periphery, while the poorest populations remained in the city center. The households migrating to the suburbs were generally wealthier than those who had previously resided there (Lee, 2020).

The conclusion of World War II in the United States led to a significant influx of returning soldiers, accompanied by a rapid population increase. This resulted in both a housing shortage and a surge in demand for affordable housing. To address this issue, the U.S. government introduced policies to promote the large-scale development of suburban housing projects specifically aimed at low-income veterans. This resulted in the mass production of standardized residential buildings. The first modern suburban development was initiated in 1947 with the establishment of Levittown, a suburban extension on Long Island, New York. Developed by Levitt & Sons, Inc., Levittown was a pre-planned, mass-produced housing complex featuring over 17,000 affordable homes, along with supporting amenities such as shopping centers, playgrounds, swimming pools, community halls, and schools. Levittown thus became a national symbol of suburban expansion during the post-war construction boom. Following its success, the same company replicated this model in Pennsylvania (1951) and New Jersey (1958), where homes were designed for the upper-middle class, with larger and more expensive housing models (Castillo-Soriano, 2021).

Modern suburbia is characterized by low-density residential areas, typically situated on the periphery of urban centers, and is defined by single-family homes with limited commercial and recreational facilities. As a developmental process, suburbanization represents the systematic and rapid expansion of urban peripheries from the core city, encompassing various forms of growth, from planned communities to informal settlements. This process reflects diverse global trajectories of suburbanization, having evolved significantly since its inception, particularly in the context of post-war urban planning and societal aspirations (Lozynskyi, 2022). One of the most notable socio-spatial characteristics of such suburban environments is their homogeneous social structure, where residential units are predominantly occupied by homeowners who rely on private automobiles as their primary means of transportation (Abbott, 2023). The identity of suburban residents is influenced by their social status, daily practices, and leisure activities, which collectively contribute to the distinct character of suburban spaces (Lozynskyi, 2022). Traditionally, the suburb was conceived as a physical

space consisting of detached and semi-detached houses with yards and lawns on the outskirts of urban areas. However, it also represents a complex web of expectations and values centered around homeownership, family life, and continuous economic prosperity.

The evolution of suburbia led to the emergence of a specific developmental model known as cookie-cutter or tract housing. This typology refers to the design of "tract homes," wherein residential complexes are built by subdividing land into smaller parcels, with numerous identical or similar houses constructed. In its literal sense, a "tract house" refers to "one of many identical houses in a row." Initially, this typology was intended for single-family housing units, characterized by simple designs, standardized functional layouts, and cost-effective materials (Martin, 2000). A defining feature of these settlements is their location on urban peripheries, where a single developer purchases a large tract of land and constructs a significant number of uniform houses. As such, the first defining characteristic of tract housing is standardization, which arises from practical considerations, such as the use of identical designs and materials to reduce construction costs and time. While architectural uniformity can foster a sense of community, it can also lead to social homogeneity, potentially restricting diversity and individual expression among residents (Slate, 1994). A further critical issue associated with cookie-cutter suburbs is their low population density, which contributes to urban sprawl, thereby putting additional pressure on infrastructure and natural resources (Slate, 1994).



Figure 1: (a) 1950s Aerial of a development of single family houses near Woodbridge, and (b) Plan Levittown, the first American-style suburb, built by William Levitt on Long Island

(Source: (a) Photo by R. Krubner/ClassicStock/ Getty Images,

(b) [https://www.reddit.com/r/Suburbanhell/comments/uall7mw/this\\_is\\_levittown\\_the\\_first\\_americanstyle\\_suburb/?rdt=53539](https://www.reddit.com/r/Suburbanhell/comments/uall7mw/this_is_levittown_the_first_americanstyle_suburb/?rdt=53539))

#### 4. ANALYSIS OF SELECTED CASE STUDIES

##### 4.1. Levittown, New York, USA

Levittown represents the first large-scale, mass-produced residential development, constructed between 1947 and 1951. It emerged as a response to the growing housing demand in the United States and served as a prototype for post-war planned communities (Rybczynski, 2017). Levittown provided affordable homeownership opportunities for veterans and their families, significantly contributing to the rise of the middle class and the expansion of consumer culture in post-war America. As such, it became a symbol of the "American Dream," allowing thousands of families to achieve homeownership (Levittown, 2018).

The typical Levittown house was a single-story dwelling in either Cape Cod or ranch style, with a living area of approximately 75 to 100 square meters. These homes generally featured two bedrooms, a living room, a kitchen, and a bathroom. The standardized architectural design of Levittown led to a lack of architectural diversity, resulting in a monotonous and uniform aesthetic (Levittown, 2024). Over time, few houses remain in their original state, as many have been modified to accommodate the evolving needs of homeowners, leading to greater individualization of the neighborhood. Levittown set a precedent for suburban development in the United States, influencing the design and construction of future suburban communities. It showcased the potential of mass-produced housing to meet the needs of a growing population while reinforcing the American ideal of homeownership. However, it is essential to note that the original Levittown sales contracts explicitly excluded people of color, which contributed to racial segregation and restricted diversity within the community (Marshall, 2015).



Over the decades, Levittown has outlived both its most enthusiastic supporters and its harshest critics. Today, it stands as a more complex symbol, representing not just the success of the American Dream or the conformity and uniformity it initially fostered, but also the shifting dynamics of suburban life and the ongoing evolution of its social and cultural significance.

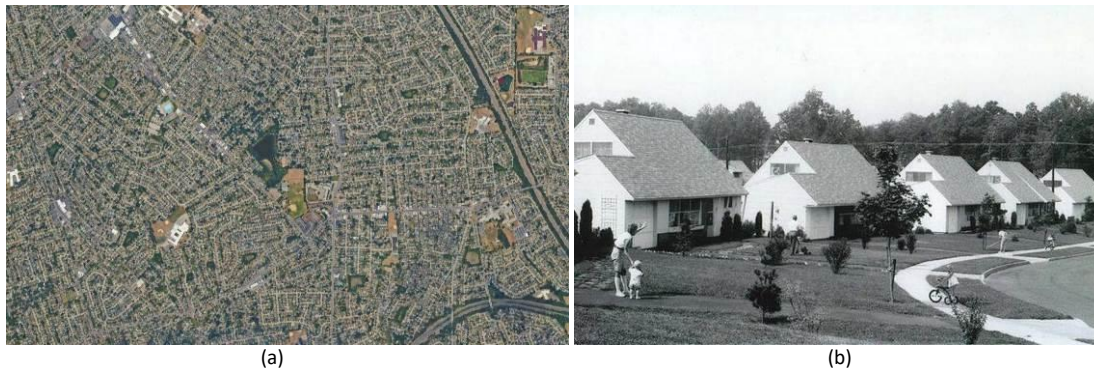


Figure 2: (a) Aerial shot of Levittown, New York and (b) The original appearance of houses in the 50s in Levittown  
(source: (a) <https://www.gmaps.com>,  
(b) [https://www.reddit.com/r/Suburbanel/comments/uai7mw/this\\_is\\_levittown\\_the\\_first\\_americanstyle\\_suburb](https://www.reddit.com/r/Suburbanel/comments/uai7mw/this_is_levittown_the_first_americanstyle_suburb))

#### 4.2. Irvine, Los Angeles, USA

The planned city of Irvine, located in Orange County, California, serves as a notable example of cookie-cutter suburban development within the Los Angeles metropolitan area. Established in the 1960s as a development project by the Irvine Company, the city was initially conceived as a residential area for the company's employees. Over time, however, this suburban settlement evolved into a thriving city, home to numerous corporations and universities.

Urbanistically, Irvine is characterized by a meticulously planned layout, with clearly defined residential and public zones. Similar to other suburban developments, its residential organization is divided into tracts, consisting of nearly identical housing units. The development and aesthetic of the city are strictly regulated, with specific zoning laws governing elements such as roofing styles, color schemes, and landscaping in certain areas. Despite its highly controlled design, Irvine integrates bicycle paths, parks, and green belts, all of which connect to environmental reserves, enhancing the city's sustainability. Furthermore, some of the older districts, such as Northwood, which developed in the early 1970s, were built independently of the Irvine Company, and as such, they exhibit less rigid design regulations. Architecturally, the residential units primarily follow standardized designs, predominantly reflecting California-style architecture. Since the 1960s, many homes have undergone modifications and expansions, gradually altering the once-uniform appearance of the community.

This evolution in the appearance and layout of Irvine reflects a dynamic interplay between standardized suburban development and the individualization of homes and neighborhoods as residents adapt to their changing needs and aspirations.

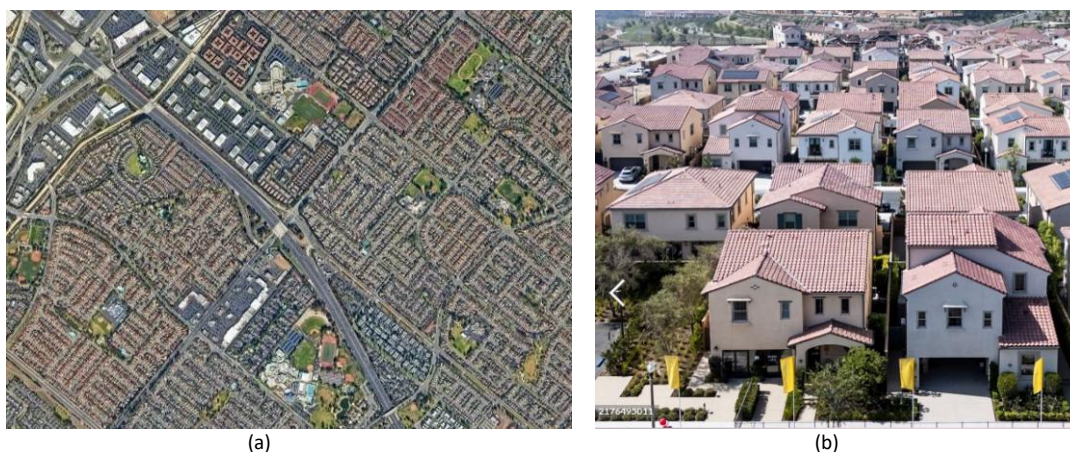


Figure 3: (a) Aerial view of Irvine, California, and (b) The appearance of the residential buildings in Irvine  
(source: (a) [www.gmaps.com](http://www.gmaps.com) (b) <https://www.ocregister.com/2023/01/12/irvine-may-change-how-city-officials-are-elected/>)

#### 4.3. Mississauga, Ontario, Canada

Mississauga exemplifies a prototypical North American suburban city, predominantly composed of tract housing developments characterized by extensive rows of similar or identical single-family residences. This city serves as a model of planned urban expansion, emphasizing uniform residential districts, expansive front and back yards, and low population density. The housing typology primarily consists of single-family detached homes, supplemented by townhouses and semi-detached houses. However, to mitigate the "copy-paste" effect, design strategies have been implemented, incorporating variations in façade cladding, construction materials, and colour schemes. These modifications aim to alleviate the visual monotony of the neighbourhood while preserving a coherent architectural aesthetic.



**Figure 4:** (a) Aerial view of Mississauga, Ontario, and (b) The appearance of the houses in Mississauga, Ontario

(source: (a) <https://www.gmaps.com>,

(b) [https://www.reddit.com/r/Suburbanhell/comments/iqsnse/dystopian\\_suburbia\\_in\\_mississauga\\_ontario\\_canada/?rdt=56130](https://www.reddit.com/r/Suburbanhell/comments/iqsnse/dystopian_suburbia_in_mississauga_ontario_canada/?rdt=56130))

#### 4.4. Craigieburn, Melbourne, Australia

Craigieburn is a rapidly growing suburb of Melbourne that exhibits all the characteristics of cookie-cutter housing. This area illustrates the challenges of suburban expansion, as it is predominantly composed of houses with similar designs and dimensions, constructed on relatively small plots and arranged in tracts, contributing to the uniform appearance of the neighborhood. This approach enables efficient land use and ensures housing affordability for many families. Architecturally, the houses share a similar aesthetic; however, this trend has begun to shift in recent years. Public amenities are strategically planned within designated zones while remaining well-integrated with residential areas. Although residents primarily rely on private vehicles for transportation, the suburb maintains strong connectivity to the city centre.



**Figure 5:** (a) Aerial view of Craigieburn, Melbourne, and (b) The appearance of the houses in Craigieburn, Melbourne

(source: (a) <https://www.gmaps.com> (b) <https://www.pomsinoz.com/articles.html/where-to-live-in-australia/victoria/craigieburn-melbourne-suburbs-r178/>)

#### 4.5. Jumeirah Park, Dubai, UAE

Jumeirah Park represents a master-planned residential community in Dubai, developed by a single company, encompassing all the characteristics of tract housing. This residential area spans over 380 hectares and includes more than 3,000 luxury villas. Unlike the previously analysed examples, Jumeirah Park offers a form of more luxurious housing. In terms of typological features, the houses are designed on individual plots as detached units. To partially break the uniformity of the neighbourhood, the buildings are designed in three



primary styles: heritage, inspired by traditional Arabian architecture; regional, combining elements of both Arabian and Islamic architecture with flat roofs and terraces that provide additional outdoor space; and legacy, influenced by European styles, characterized by pitched roofs, decorative arches, and classical façades (Jumeirahpark, 2013). A key distinction of this development from the originally built suburban neighbourhoods is the inclusion of numerous recreational facilities, which cater to contemporary lifestyles.

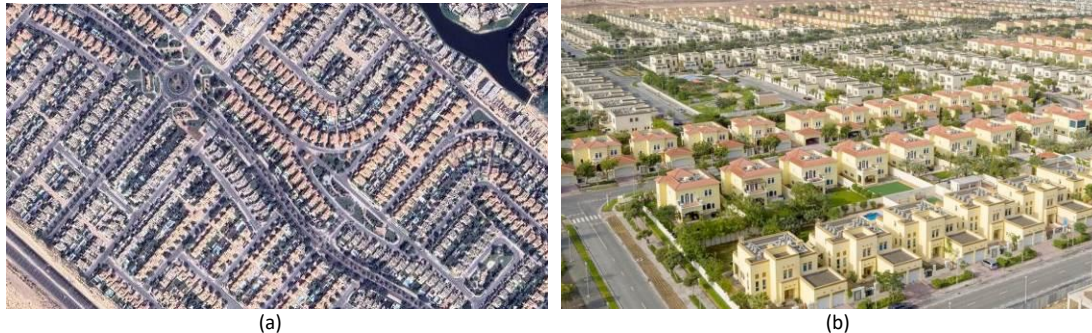


Figure 5: (a) Aerial view of Jumeirah Park, Dubai, and (b) ) The appearance of the houses in Jumeirah Park, Dubai, (source: (a) <https://www.gmaps.com> (b) <https://www.propertyfinder.ae/blog/jumeirah-park/>)

## 5. DISCUSSION

Suburbanization, as an urban planning model, represents an inevitable process within the expansion of major cities. Its fundamental role in the development of global urbanism is indisputable, as it contributes to shaping contemporary urban spaces (Lung-Amam, 2024). Modern suburbs, characterized by low density and low-rise structures, stand in contrast to central urban areas, which are defined by high-density, high-rise developments. According to relevant statistical data, more than half of the population in the United States resides in suburban areas, with this number exhibiting a continuous growth trend (Parker et al., 2018).

In American culture, beginning with the construction of Levittown and subsequently other residential developments, an idealized concept of "achieving the American Dream" emerged, embodied in the image of a happy family in front of a uniform, single-family house. This imagery fostered a widespread aspiration to reside in cookie-cutter neighbourhoods. The combination of this idealized suburban vision and the rapid construction of large numbers of identical houses has led to the establishment of an urban pattern that has extended beyond the United States and remains prevalent today.

On the other hand, suburban housing models are generally not characterized by significant architectural value, although their urban planning relevance cannot be disputed. Contemporary lifestyles have undergone substantial transformations compared to the social and economic conditions that prevailed in the 1950s and 1960s. Consequently, it is imperative that suburban developments evolve in accordance with present-day requirements. Based on the findings of this study, life in copy-paste housing can be considered functional and rational, given that suburban areas are systematically planned and supported by organized infrastructure. However, the overall quality of life in such neighbourhoods is influenced by numerous factors, which could serve as the subject of future research.

## 6. CONCLUSION

The development of suburban areas near major urban centers experienced significant expansion in the mid-20th century due to the rapid increase in housing demand following World War II. The first large-scale example of a suburban settlement was Levittown, constructed in the 1950s with over 17,000 standardized housing units, providing affordable housing for returning war veterans. The creation of a uniform architectural aesthetic led to the emergence of a distinct suburban typology, commonly referred to as "cookie-cutter" neighborhoods or "tract housing." In this context, the term "tract" denotes a series of identical houses, mass-produced with standardized designs to enable more efficient and cost-effective construction of large residential complexes (Kunert, 2023). The large-scale construction of thousands of identical housing units streamlined the building process, reducing costs and accelerating development, ultimately resulting in neighborhoods composed of uniformly designed homes built from the same materials and in the same color. The uniformity of these communities has raised the question of whether living in copy-paste houses can truly be considered humane.



A case study analysis of five distinct "cookie-cutter" neighborhoods, constructed in different periods and across various geographic locations, has provided insights into this inquiry. Suburbs represent dynamic urban spaces that reflect broader societal trends and challenges. While the original "tract housing" models faced criticism for their uniformity, over time, certain modifications—such as variations in color schemes and façade aesthetics—have been introduced, partially mitigating the issue of monotony.

The question posed in this study has been examined through selected case studies of five different "cookie-cutter" neighborhoods built in different time periods and locations. In this context, several key conclusions can be drawn: suburbs function as both physical environments and dynamic spaces that mirror broader social trends and challenges. The initial appearance of tract housing, along with professional critiques that emerged over time, contributed to the gradual diversification of housing models, even though this primarily entailed aesthetic modifications—such as variations in color—rather than structural differences, thereby only partially addressing the initial problem of uniformity.

In contemporary suburban planning, there is a greater emphasis on green spaces and public areas. Modern urban design approaches aim to accommodate evolving lifestyles, particularly in terms of connectivity and sustainability. This form of housing largely meets human residential needs on multiple levels, while the challenges related to organization, design, and overall quality remain within the scope of future urban planning and architectural solutions. The primary goal remains the enhancement of residential quality and the adaptation of suburban environments to contemporary living requirements.

#### ACKNOWLEDGMENT

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#### REFERENCES

1. Abbott, C. 2023. Suburbs: A Very Short Introduction, Very Short Introductions. New York,online edn, Oxford Academic. <https://doi.org/10.1093/actrade/9780197599242.001.0001>, accessed 15 Feb. 2025.
2. Castillo-Soriano, M. de los Á., Canavati-Espinosa, A., & Maldonado-Flores, D. I. (2021). O imaginário suburbano e o Mass Media: um reflexo de sua construção e desmontagem na geração do chamado Baby Boom nos Estados Unidos (1946-1974). *Revista Perspectivas*, 6(1), 6–23. <https://doi.org/10.22463/25909215.2917>
3. Jackson, K. T. (1987). *Crabgrass frontier: The suburbanization of the United States*. Oxford University Press. pp. 13-14.
4. Jumeirahpark, 2013. <https://www.dubaijumeirahpark.com/> [Accessed: 20th February 2025].
5. Kunert, A. (2023). Suburbs: A Very Short Introduction. Oxford University Press eBooks. <https://doi.org/10.1093/actrade/9780197599242.001.0001>
6. Lee, S. K. (2020). *Crabgrass frontier revisited in new york: Through the lens of 21st-century data*. Mimeograph, Columbia University.
7. Levittown: The Blueprint for Suburban Development and Its Lasting Impact. 2024. [https://alsyedconstruction.com/what-was-levittown-what-are-the-pros-and-cons-of-this-type-of-construction/#google\\_vignette](https://alsyedconstruction.com/what-was-levittown-what-are-the-pros-and-cons-of-this-type-of-construction/#google_vignette) [Accessed: 15th February 2025].
8. Levittown, NY, 2018. <https://kerimurrayarchitecture.com/levittown-ny/> [Accessed: 20th February 2025].
9. Lozynskyi, R. (2022). Suburb as a socio-spatial phenomenon and post-socialist city. *Human Geography Journal*, 32, 24-33.
10. Lung-Amam, Willow S. 2024. *The right to suburbia: Combating Gentrification on the Urban Edge*. University of California Press, USA.

11. Mace, A. (2009). Suburbanization. *International Encyclopedia of Human Geography*. Amsterdam: Elsevier. pp 77-81.
12. Martin, Christopher T. 2000. Tract - house modern: A study of housing design and consumption in the Washington suburbs, 1946–1960. The George Washington University ProQuest Dissertations & Theses.<https://www.proquest.com/openview/10cd8f00f03f12891775e47695cc8d9e/1?pq-origsite=gscholar&cbl=18750&diss=y,%20accessed%20> [Accessed: 16th December 2024].
13. Marshall, C. 2015. A history of cities in 50 buildings, Levittown, the prototypical American suburb – a history of cities in 50 buildings, day 25. *The Guardian*. <https://www.theguardian.com/cities/2015/apr/28/levittown-america-prototypical-suburb-history-cities> [Accessed: 12th February 2025].
14. Parker, K., Horowitz, J. M., Brown, A., & Fry, R. D’vera Cohn, and Ruth Igielnik (2018), “Demographic and Economic Trends in Urban, Suburban and Rural Communities,” Pew Research Center (May 22).<https://www.pewresearch.org/social-trends/2018/05/22/demographic-and-economic-trends-in-urban-suburbanand-rural-communities/>
15. Slate, B. R. (1994). *Toward new tracts for America: the house and its serial deployment* (Doctoral dissertation, Massachusetts Institute of Technology). pp.40.
16. Rybczynski, W. 2017. The Pioneering “Levittowner”. Zell/Lurie Real estate center, Review. <https://realestate.wharton.upenn.edu/wp-content/uploads/2017/03/556.pdf> [Accessed: 14th February 2025].