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**"AESTHETIC TRENDS AND COMMERCIAL SHIFTS AS A RESULT OF
GENTRIFICATION: A comparison between two international cities through Google
Street View"**

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ABSTRACT

Urban gentrification, a process characterized by socioeconomic transformation and cultural shifts, has profound implications for cities worldwide. This article examines the aesthetic trends and commercial shifts brought about by gentrification through a comparative study of two streets in different international cities: Andra Långgatan in Gothenburg, Sweden, and Carrer del Parlament in Barcelona, Spain. Utilizing the innovative tool of Google Street View, this research identifies common signs of gentrification, focusing on the types of businesses that thrive and the aesthetic changes that occur in these diverse urban settings. By analyzing these transformations, the study seeks to determine whether gentrification leads to a homogenized urban aesthetic, creating areas that look increasingly similar despite their distinct cultural and geographical contexts. This investigation not only sheds light on the specific developments in Gothenburg and Barcelona but also contributes to the broader discourse on the global patterns and impacts of gentrification. The findings underscore the universal nature of certain gentrification markers while highlighting the importance of local cultural retention amidst these changes.

Key words: Gentrification, Urban Transformation, Aesthetic trends, Commercial shifts, Comparative study, Google Street View, Urban Development, Cultural Shifts, Gothenburg, Barcelona, Socioeconomic changes, Urban Planning, Homogenized urban aesthetics, Local businesses, urban renewal.

1. INTRO

Gentrification is a multifaceted urban phenomenon that reshapes neighborhoods through socioeconomic and cultural transformations. As cities evolve, gentrification often brings about notable changes in both commercial landscapes and aesthetic appearances, impacting the character and identity of urban spaces. This study delves into the effects of gentrification on two specific streets: Andra Långgatan in Gothenburg, Sweden, and Carrer del Parlament in Barcelona, Spain. By employing Google Street View as a research tool, this article aims to uncover the nuances of gentrification in these distinct settings.

Andra Långgatan and Carrer del Parlament, though separated by geography and culture, have both experienced significant gentrification over the past decade. Andra Långgatan, situated in the lively Linnéstad district of Gothenburg, has transformed from a historically working-class area into a hub of upscale businesses and nightlife. Similarly, Carrer del Parlament, located in the vibrant Sant Antoni neighborhood of Barcelona, has shifted from traditional markets and local businesses to trendy cafes, boutiques, and gourmet restaurants.

This research addresses critical questions about the commonalities and differences in the gentrification processes of these two streets. It seeks to identify whether certain types of businesses tend to thrive universally in gentrified areas and to what extent aesthetic changes contribute to a homogenized urban look. By examining the commercial and aesthetic markers of gentrification in Gothenburg and Barcelona, this study provides insights into the broader implications of urban redevelopment and its impact on local communities.

Understanding these dynamics is crucial for urban planners, policymakers, and stakeholders aiming to balance development with cultural preservation. This investigation contributes to

the ongoing discourse on gentrification, offering a comparative perspective that highlights both global trends and local specificities.

1.2 Research Questions, and Objectives

This study aimed to analyze the urban transformation and identify specific common signs of gentrification in two streets that have undergone a similar process in gentrification over the last decade but are located in two different countries. The study also sought to answer the following questions:

1. Are there any similarities in terms of what businesses tend to thrive in two gentrified streets, which are culturally and geographically different from each other?
2. Does gentrification function as a mechanism that produces a uniform visual appearance across all gentrified cities? If so, are there specific aesthetic markers of gentrification that occur in both places?

To answer these questions, two streets in two different countries were selected for analysis:

1. Andra Långgatan, Gothenburg, Sweden
2. Carrer del Parlament, Barcelona, Spain

Andra Långgatan, situated in the Olivendal area of Gothenburg, Sweden, is a well-known street, traversing the Linnéstad district, a vibrant and diverse area situated to the west of the city center. The street is renowned for its vibrant nightlife, composed of numerous bars, pubs, restaurants, and small shops, which collectively make it a popular destination for both locals and visitors.

Andra Långgatan runs parallel to Första Långgatan to the north and Tredje Långgatan to the south. It begins near Järntorget, a major square and transport hub in Gothenburg, and extends westward toward the Masthuggstorget area. This location places it within easy reach of various cultural and entertainment venues, as well as the scenic area of Haga, known for its picturesque wooden houses and cobblestone streets.

Additionally, the street is rich in historical and cultural evolution. Originally constructed in the mid to late 17th century, the majority of the current buildings date back to the 1870s-1910s. Historically, it served as a working-class neighborhood and developed a somewhat notorious reputation over the years. However, this area has undergone significant transformations over time, becoming a hub of urban renewal and cultural shifts (Järlehed, Lykke Nielsen, Rosendal, 2018).

The area has not been immune to the pressures of gentrification, a process that has been observed in various parts of Gothenburg. The presence of adult entertainment clubs and other less conventional businesses has historically served as a buffer against rapid upscale development by keeping rental costs lower. This unique economic condition has allowed a diverse range of businesses to establish themselves on Andra Långgatan (Franzén, 2012).

Nevertheless, the ongoing expansion of Gothenburg's central areas poses a threat to the street's distinctive character, as higher-income groups and more upscale businesses increasingly find the area attractive (Franzén, 2012). In recent years, Andra Långgatan has undergone a notable process of gentrification, marked by socioeconomic changes and the influx of higher-income residents, driven by both public and private initiatives. The area,

which previously housed simple beer houses, alternative clothing shops, and political organizations, is now characterized by upscale restaurants, pubs, and independent shops (Järlehed, Lykke Nielsen, Rosendal, 2018). This transformation reflects broader gentrification trends observed in many urban centers, where traditional working-class areas are revitalized and attract more affluent residents and businesses (Hultgren, et al., 2012). It appears that the gentrification of Andra Långgatan has been facilitated by a coordinated approach between public authorities and private developers. Public initiatives have included urban planning strategies designed to preserve the distinctive character of the area while enhancing its appeal to investors and higher-income residents (Franzén, 2012). At the same time, private investors have played a significant role in the gentrification process by renovating buildings, opening upscale businesses, and promoting the area as a desirable location (Järlehed, Lykke Nielsen, Rosendal, 2018).

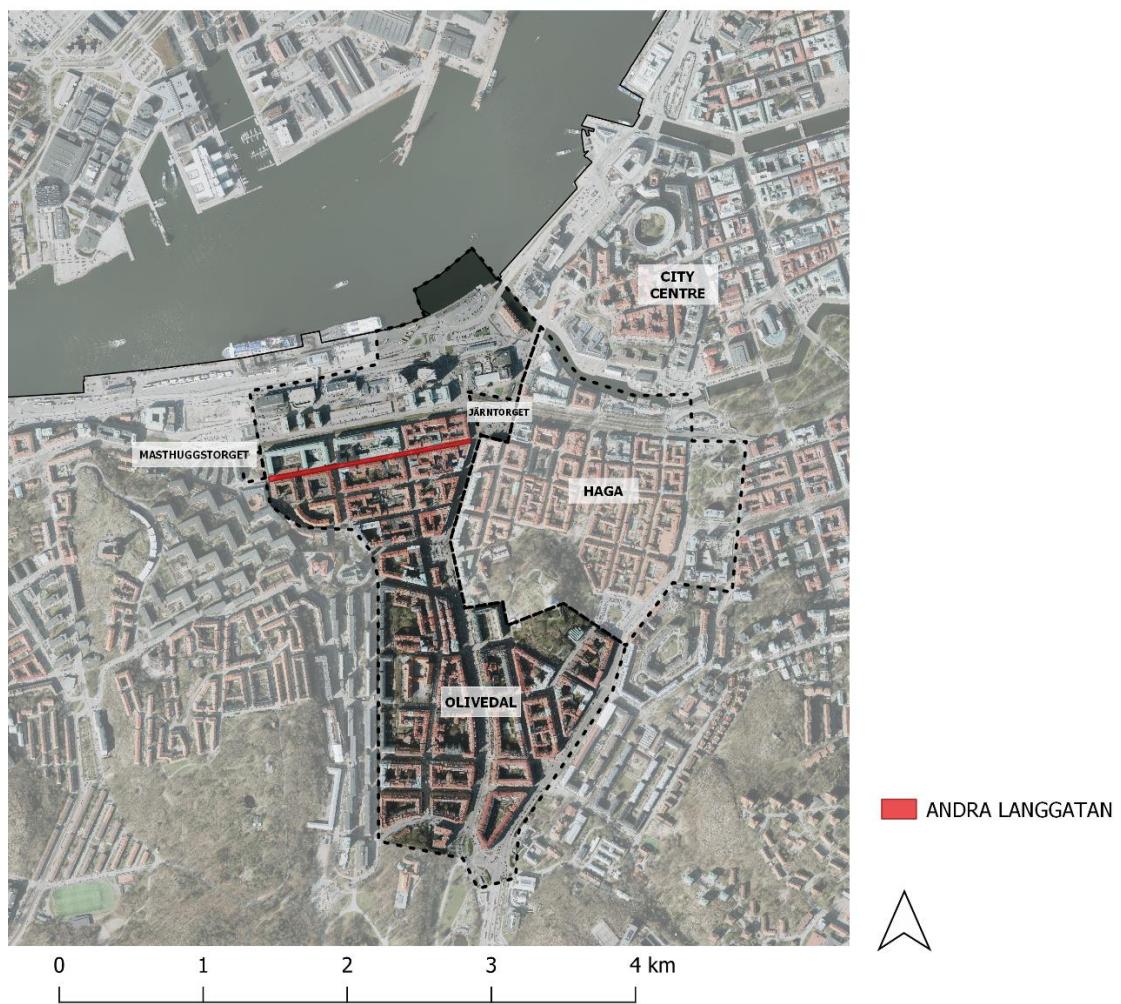


Figure 1: *Map over area of study., Andra Långgatan, Gothenburg., own elaboration, July, 2024*

2. The Carrer del Parlament is situated within the Sant Antoni neighborhood of the Eixample district in Barcelona, Spain. This street is distinguished by its dynamic ambience, which is characterised by a diverse mix of trendy cafés, restaurants, and shops. It is situated in a southwest direction from the central Plaça de Catalunya and in an northeast direction from

Montjuïc hill. It runs in a southwesterly direction, roughly parallel to Avenida del Paral·lel, situated to the south of Carrer del Parlament, which is another major thoroughfare street in the area.

Calle del Parlament extends from Carrer de Manso in the west to Carrer de Comte Borrell in the east. It intersects with other streets, including Carrer de Viladomat and Carrer del Comte d'Urgell, which situates it within the vibrant Sant Antoni neighborhood. This area is part of the Eixample district, which is distinguished by its grid-like layout and modernist architectural style.

This location is situated in close proximity to notable landmarks such as the Mercat de Sant Antoni, a historic market hall. Additionally, the area is well-connected by public transportation, facilitating accessibility from various parts of the city.

Calle Parlament is a street with a rich history and a significant role in the cultural transformation of the city. The architectural style of the area is reflective of the late 19th and early 20th centuries, with numerous structures showcasing modernist and neoclassical styles. Historically, Sant Antoni served as a working-class district with a vibrant local community. Over time, however, the area has undergone significant changes, evolving into a dynamic urban center characterized by cultural shifts and rejuvenation (Caballero, 2018; López, Ortiz, Solana, 2022). Despite its rich history, Calle Parlament has not been immune to the forces of gentrification, a phenomenon observed in many parts of Barcelona.

The street, previously renowned for its traditional markets and local businesses, has witnessed a surge in property values and a transition towards more upscale development. This process has been shaped by the influx of higher-income residents and the establishment of trendy cafes, boutique shops, and gourmet restaurants, which have transformed the economic landscape of the area (Caballero, 2018; López, Ortiz, Solana, 2022).

In recent years, Calle Parlament has emerged as a key area of gentrification in Sant Antoni. This shift, which has been marked by significant socioeconomic changes, has been driven by both public and private sector efforts. The neighborhood, which previously housed modest eateries and local artisan shops, has undergone a significant transformation, now distinguished by chic bars, stylish cafés, and independent retail stores. These transformations reflect broader urban trends where historic working-class neighborhoods are revitalized and attract more affluent residents and businesses. The gentrification of Calle Parlament has been facilitated by coordinated efforts between municipal authorities and private developers. Public initiatives have concentrated on urban planning strategies with the objective of enhancing the area's appeal while attempting to preserve its distinctive character. These initiatives include the implementation of pedestrian-friendly street designs and the promotion of cultural activities. Concurrently, private investors have contributed to the revitalization of the area by refurbishing old buildings, opening high-end establishments, and marketing it as a desirable destination for both locals and tourists (Caballero, 2018).



Figure 2. Map over area of study., Carrer del Parlament, Barcelona. own elaboration, July, 2024

1.3 Hypothesis

The hypothesis is that gentrification will lead to similar patterns in terms of the types of businesses that thrive in gentrified areas and the aesthetic trends that emerge. These changes will result in the urban environment becoming increasingly similar across different areas.

2. BACKGROUND

2.1 Commercial gentrification

Commercial gentrification is the transformation of retail and business spaces in urban neighborhoods, typically driven by economic development and the influx of wealthier clientele. This process often begins with the arrival of new, upscale businesses such as trendy cafes, boutique shops, and gourmet restaurants, which replace older, traditional establishments. One of the most prominent indicators of commercial gentrification is the arrival of new, upscale businesses, such as artisanal cafes, boutique stores, gourmet restaurants, and specialty shops, which replace traditional, long-standing local establishments. These new businesses cater to a wealthier clientele, often offering higher-priced goods and services. (Meltzer, 2016). Another sign is the change in the aesthetic and branding of commercial spaces. The renovation and modernization of old storefronts to create trendy, visually appealing environments is a common phenomenon. Additionally, the neighborhood may experience an influx of chain stores and franchises, which further intensifies competition and raises rents. (Meltzer, 2016) Furthermore, there is often a visible demographic shift, with an increase in younger, more affluent residents moving into the area. This is accompanied by changes in the types of services offered, such as the establishment of fitness studios, co-working spaces, and high-end retail stores. Furthermore, community events and marketing strategies may begin to focus on attracting tourists and new residents, reflecting a shift in the neighborhood's identity and target demographic. (Casado M, Blanco A, Lopez-Gay, A, under revision)

While commercial gentrification can revitalize urban areas by boosting local economies and enhancing the attractiveness of neighborhoods, it also has significant downsides. Such developments can result in increased rental costs and property values, which often force long-standing local businesses to close due to financial constraints. Such displacement has the effect of disrupting the social and economic fabric of communities, thereby eroding the unique cultural identities that define them. (Richardson, Mitchell, & Franco, 2019). Moreover, the shift towards a more affluent consumer base can marginalize existing residents, thereby altering the character and accessibility of local services. (Meltzer, 2016)

2.2 Aesthetic markers in Commercial gentrification

A number of articles have highlighted the fact that gentrified areas feature a number of visual markers that signal redevelopment and urban renewal. (Meltzer, 2016) (Lindner, Christoph, & Sandoval, 2021) (Marieke, 2013) Among the markers mentioned are public art displays, including art installations and art projects. These can range from murals and sculptures to decorated satellite dishes (see figure 3), which can be seen in streets of Amsterdam. They serve as both aesthetic enhancements and symbols of cultural identity. (Wesselman, 2021).

Another indicator of gentrification is the emergence of boutique shops, upscale bars, restaurants, and coffee shops, designer stores, and specialty retailers. These types of businesses are commonly found in gentrified areas. This kind of commercial activity frequently replaces older, more utilitarian businesses and caters to the preferences of new, more affluent residents. (Marieke, 2013; Lindner, Christoph, & Sandoval, 2021).

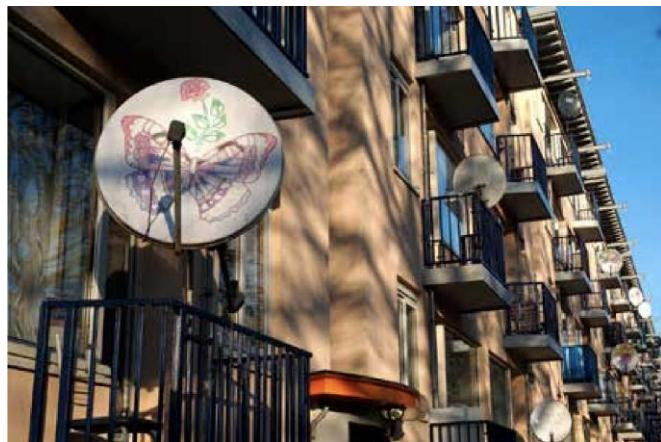


Figure 3. The streets of Amsterdam are adorned with satellite dishes that have been decorated. (Wesselman, 2021)

The adaptive reuse of old buildings, which transforms them into new cultural or commercial spaces, is a notable marker of urban development. This may include transforming former educational institutions, industrial facilities, or warehouses into art centers, creative hubs, or trendy cafés. (Linder, Sandoval 2021) Wesselman (2021) provides an illustrative example of the repurposing of an old school building into a creative incubator, which is exemplified by the WOW building in Amsterdam.

The appropriation of countercultural and subcultural aesthetics by new businesses and residents contributes to the emergence of a distinct visual style, often referred to as "hipster culture style." This style is commonly associated with gentrified areas and is characterized by the presence of vintage stores, bike shops, and art studios, which collectively contribute to the creation of an "authentic" urban atmosphere. (Lidner, Sandoval 2021)

The use of the English language on signage in countries where English is not the primary language can also be regarded as a marker for gentrification. In areas undergoing gentrification, signage frequently includes English, not merely as a means of communication but also to create an upscale, trendy image. The content may not always be fully comprehensible to the local population, but the use of English conveys a sense of modernity and exclusivity. (Järlehed, Lykke Nielsen, Rosendal, 2018)

3. METHODOLOGY

Google Street View is an application available in Google Street Maps that provides users with the ability to interact with panoramic images captured from various locations along streets across the globe. This study focused on the function of historical imagery, which allows users to view historical images of specific locations and observe changes over time. This feature, which was introduced in 2014, allows users to compare the present view with past images, making it a useful tool for observing urban development and other changes (Reuell, 2017). This is a relatively recent research method, most recently employed by Casado M, Blanco A, Lopez-Gay, A (under revision) to examine commercial transformation, productive gentrification, and tourism in specific areas of Barcelona. Other studies employing this method include Haddad et al. (2021), who utilized Google Street View as a substitute for human field observations to examine green gentrification in cities like Santiago de Chile. In

2014, researchers from Harvard and MIT employed computer vision algorithms to analyze millions of Google Street View images, measuring changes in urban areas. This enabled the conduct of large-scale assessments of urban development and the support of theories related to urban economics and planning (Reuell, 2017).

3.1 Analysis framework

The years of interest for this study were selected based on the availability of data in the historical timeline for each street on Google Street View. The years available for Andra Långgatan were as follows: 2009, 2011, 2014, 2016, 2017, 2019, 2020, 2022, and 2023. For Carrer del Parlament, the available years were 2008, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, and 2022. It is noteworthy that Carrer del Parlament has been registered almost every year, with the exception of a period between 2019 and 2022, which coincided with the global pandemic caused by the SARS-CoV-2 virus. The restrictions on movement and human interaction that were put in place at the local and national levels during this period prevented the registration from being carried out in the usual annual fashion. In contrast, Andra Långgatan in Gothenburg has demonstrated a more consistent level of engagement, even during the pandemic years. This can be attributed to Sweden's adoption of a markedly different strategy during the initial phase of the pandemic, which involved far less restrictions on movement and human interaction than other European countries.

Images were captured at regular intervals along Calle Parliament and Andra Långgatan, thereby ensuring comprehensive coverage of the street. The entire length of Calle Parliament (approximately 375 meters) was covered, including the addresses from 1 to 60. For Andra Långgatan, the entire street (718 m) was not covered, as the final section of the street terminates in a residential area without ground floor commercial activity and a square. The total length of the analyzed area was approximately 490 meters, 1-35 being the corresponding street numbers.

The images were recorded with the relevant metadata, including the date, time, and coordinates, and color-coded according to the type of commercial activity that could be observed on each ground floor local.

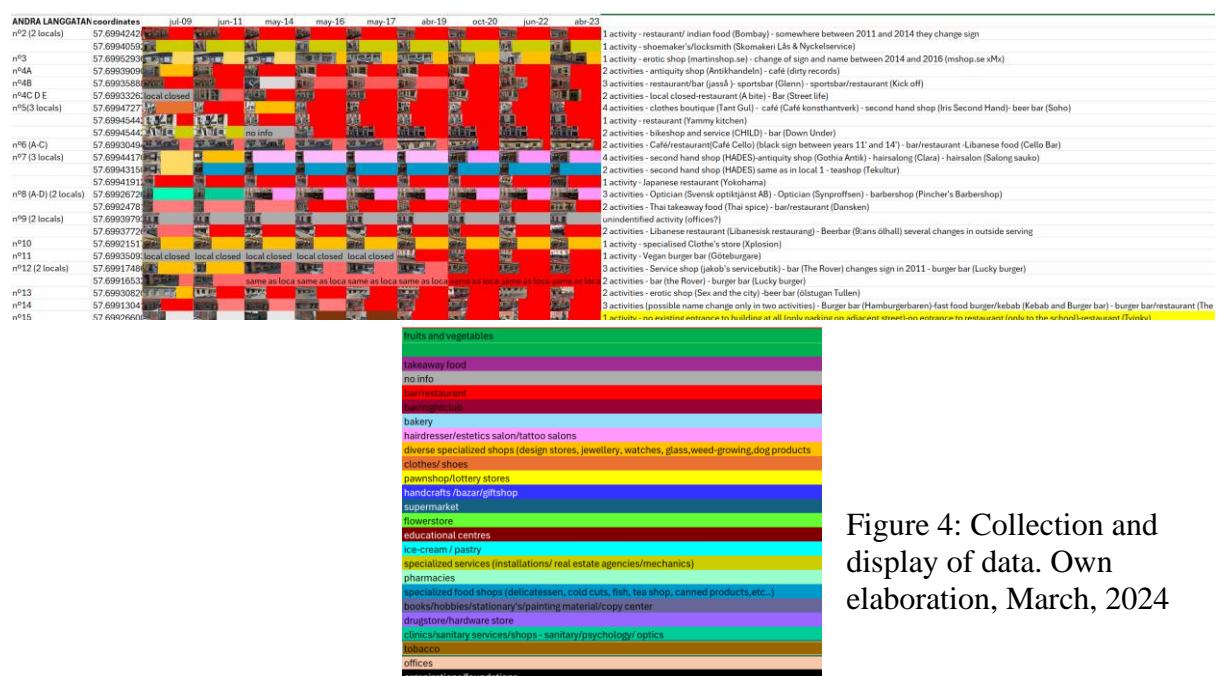


Figure 4: Collection and display of data. Own elaboration, March, 2024

The images were then compared side by side to identify any changes or evolution in commercial activity on the ground floor, as well as in building structures, street furniture, and public space usage. In terms of quantitative analysis, the number of local businesses was counted to determine the changes in activity over time. The results were then presented in graphs to illustrate how the tendencies in commercial activity have changed over time and which types of activities are more prevalent.

The average number of activities per local was also studied to ascertain whether the rate of change in activity between the two streets was similar. The next step was to identify patterns, which in this study are referred to as "aesthetic markers," as a result of commercial gentrification through a more qualitative approach. The following four categories of possible aesthetic markers of gentrification were chosen as previously referred to in the introduction of this study:

1. "Englification" of signs
2. The adaptation and transformation of local businesses and the reclamation of public space from vehicles
3. The emergence of upscale commercial activity, such as fashionable restaurants, bars, boutiques, design and specialised retail stores, trendy barbershops and cultural hubs.

3.2 Data limitations and methodological constraints

GSV is a relatively new and highly effective method for analysis, which can replace field research. However, it is not without limitations, as observed during this study. These include a poor image quality at times, poor visibility as vehicles or pedestrians obstruct the view, and temporal gaps resulting in a limited availability of images from certain years that may affect the accuracy of some observations.

As this study relies primarily on visual inspection, it is susceptible to the potential for subjective analysis. Future studies could incorporate automated image analysis tools to achieve more objective results.

4.RESULTS

4.1 Commercial shifts over time

The average number of activities for Andra Långgatan over time was found to be 2.04 activities per local, while the same ratio for Carrer del Parlament corresponded to a similar 2.01 activities per local over time. The types of commercial establishments that have become established over the past decade are similar in both locations, comprising bars, cafés, and restaurants (see figures 6 and 7).

In the case of Andra Långgatan in Gothenburg, there is a lower degree of diversity in activities than in Carrer del Parlament, which is a more densely populated street. Carrer del Parlament represents 98 ground floor locals with some kind of commercial activity for the analyzed length of the street, which is 374.32 meters. The ratio for Andra Långgatan is 62

locals for the analyzed length of 489 meters. A notable distinction between Andra Långgatan and Carrer del Parlament is the prevalence of diverse restaurant types on the former, including Japanese, Lebanese, Indian, and Thai establishments. In contrast, the latter is dominated by tapas bars and restaurants specializing in Mediterranean cuisine, typical to the area.

In both cases, we observe a decline in specialized retail, including record stores, video rental shops, and secondhand stores, on Andra Långgatan. This is likely due to the rise of online shopping, which has led to a decrease in the number of physical stores. Similarly, we see a decline in activities such as jewelry and watchmaker's, pet products and haberdasheries, which may also be attributed to the rise of online shopping.

A similar decline can be observed in Carrer del Parlament, where the number of businesses providing various services, such as gas, electric, or water installations, real estate agencies, and mechanics, has also decreased.

In both cases, there has been an increase in the number of aesthetic salons, including hair salons, barbershops, and tattoo studios.

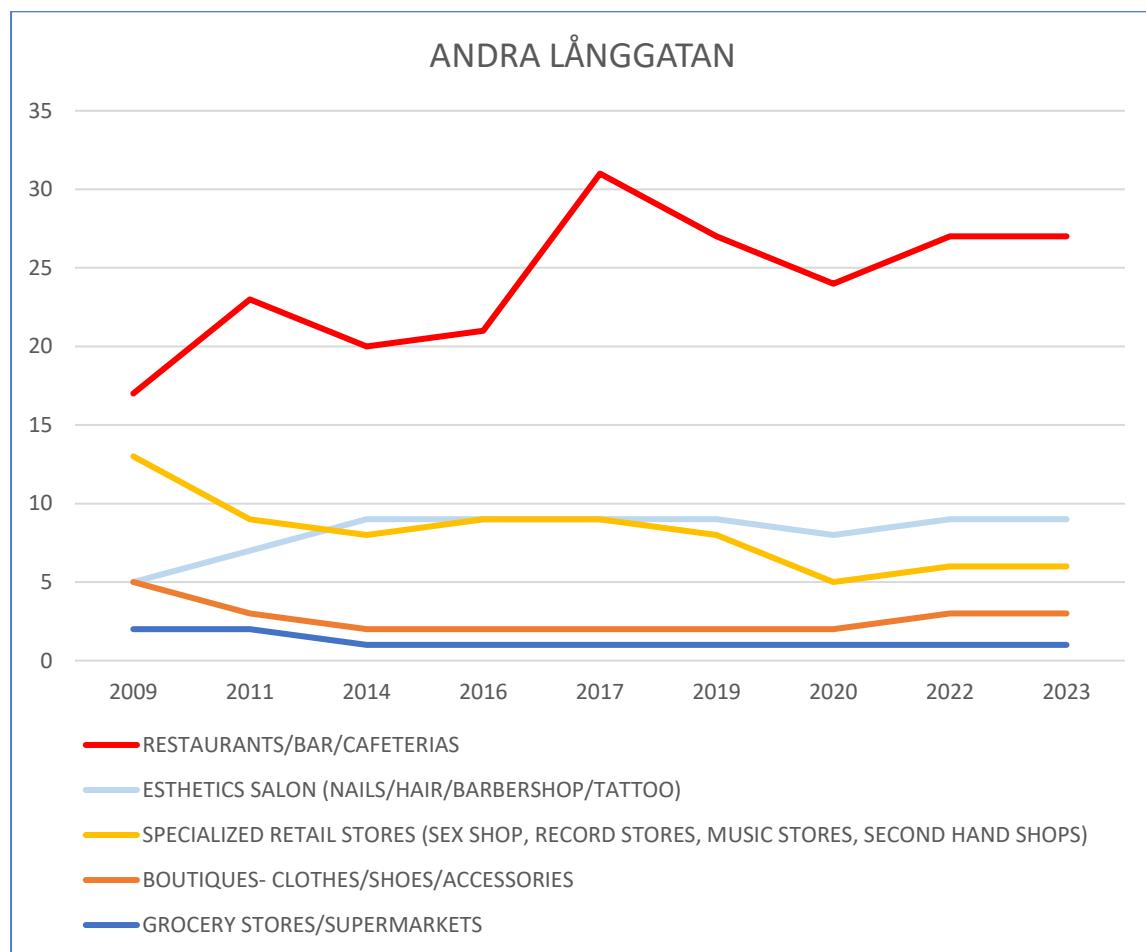


Figure 5: Own elaboration, June 2024

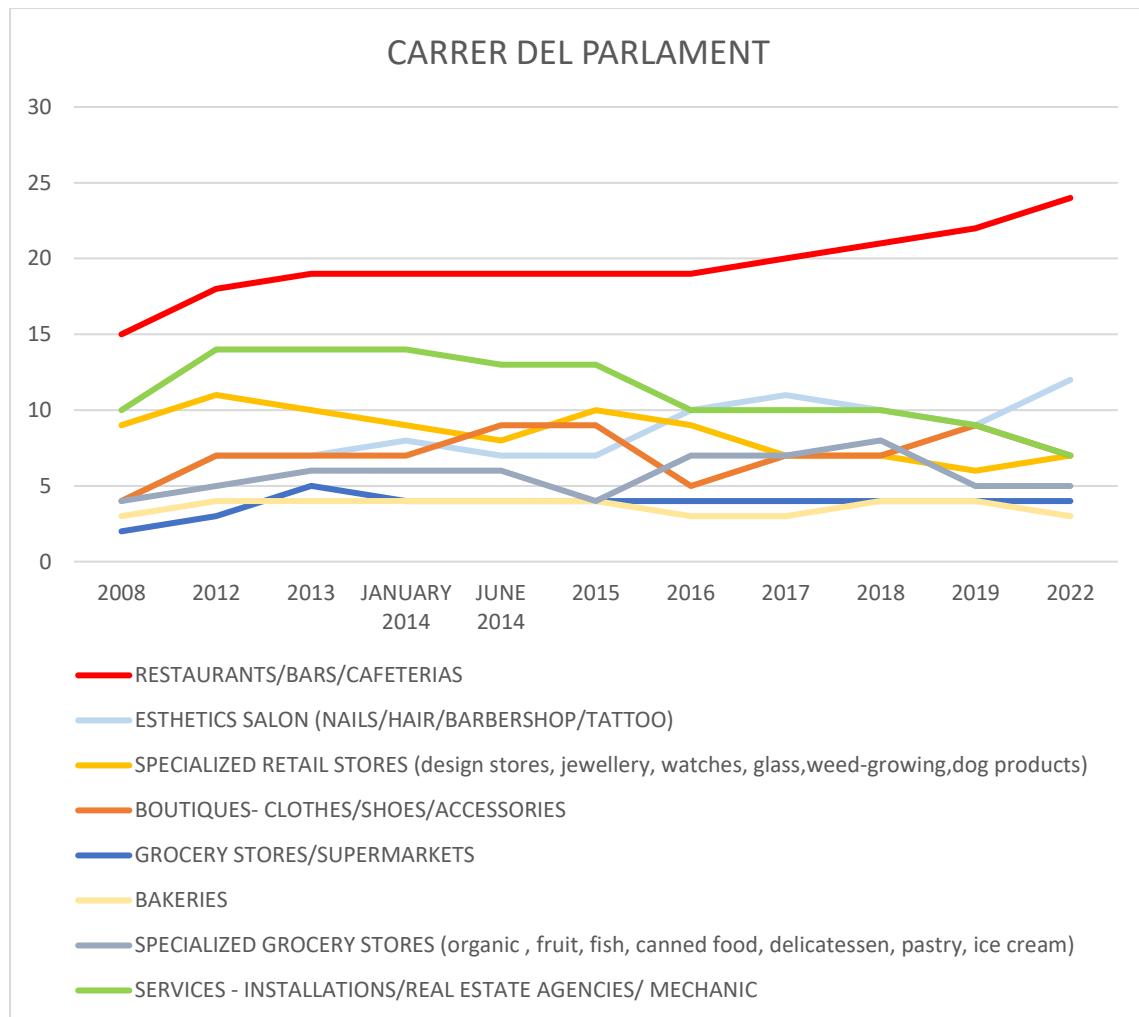


Figure 6: Own elaboration, June 2024

1.2 Aesthetic markers in gentrified space

4.2.1. ‘Englification’ of signs

Local		Andra Långgatan, Gothenburg		
14				
	2009 – ‘Hamburgerbaren’, using Swedish on signage	2016 – Kebab & Burger Bar.	2023 – ‘The Burger – Beer & Stuff’	

Local	Carrer del Parlament, nº55	
		
	2008 – business 'Retols Segarra' specializes in the printing and manufacturing of labels and signs.	2022 – 'R-Sagarra – Luxury labels', same business has now modified its traditional signage by incorporating English.
24		
	2014 – the establishment is a hair salon, with signage in the Catalan language reading "Perruquería."	2022 – The same salon has recently added the phrase "Hair Salon & Barber" to its shop window.

Table 1: Own elaboration, June 2024

Furthermore, businesses that incorporate English in their signage do so with the intention of achieving a more minimalist, trendy and sleek appearance (see table in 4.2.4).

4.2.2 Adaptation and transformation of locals and reclamation of public space from vehicles.

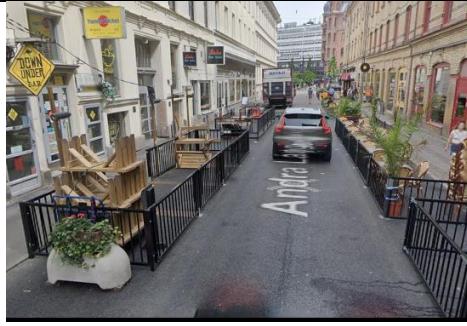
Loc al	Andra Långgatan, Gothenburg							
15			2009 – Local used as parking space.	2023 – Local transformed into restaurant				
3-6			The evolution of outdoor restaurant seating, from 2009 to 2022 on andra Långgatan					
	Carrer del Parlament					The final section of Calle Parlament illustrates the evolution of the utilization of public space for vehicular purposes from 2008 to 2022.		

Table 2: own elaboration, June, 2024

In Carrer del Parlament, no instances of the adaptation and transformation of locals were discovered, in contrast to the example presented in Andra Långgatan. However, it is clear that there has been a distinct transformation of public space usage, exemplified in the resurgence of the 'super illa' (superblock) in Sant Antoni, Barcelona. This involves transforming the traditional urban grid into a network of superblocks, wherein through-traffic is minimized and local traffic is redirected around the perimeter. This has resulted in a significant increase in the pedestrian-friendliness of the interior, with zones becoming less conducive to vehicular traffic.

A comparable phenomenon can be observed in Andra Långgatan, where the reclaiming of public space from the use of vehicles by means of the establishment of outdoor dining areas is becoming increasingly prevalent.

4.2.3 Emergence of upscale commercial activity, such as fashionable restaurants, bars, boutiques, design and specialised retail stores, trendy barbershops and cultural hubs.

Local	Andra Långgatan		
8			2009 – Local Optician's 2023 – Barbershop with a 'vintage' look
12			2009 - Local grocery shop and newsagent's 2023: Trendy Vegan Burger Bar
27			2014 – Centre for acupuncture and Chinese traditional medicine 2023 – Cafeteria 'Café e Dolci'
30			2009 – Low price grocery store 2023 – Theatre school and local theatre association

Local	Carrer del Parlament		
12			
	2008 - Local grocery store selling foreign food products		2022 – Bar - ‘Juice House’
15			
	2008 – Business specialised in installations, such as water, gas and electricity.		2022 – ‘Miss Kleckley’ – clothes boutique
16	 		
	2008 – Hardware store	2013 – Business for Installation services, Heating, water and electricity.	2022 – Trendy ‘Hipster-style’ Tattoo studio

28		
	2012 – Local Fish & Seafood shop	2022 – Clothes and shoes boutique - using English language signage.
39		
	2008 – haberdashery store	2022 – restaurant 'Federal'

Table 3: Own elaboration, June 2024

4.2.4 The presence of signage in a retro, minimalist, or vintage style.

Local	Andra Långgatan	
1		
	In 2011, an erotic shop was identified by the presence of highly visual signage.	In 2023, the commercial activity continues with a new, more minimalist signage.

<p>18</p>		
	<p>2008 – Vintage shop called 'Plastac'</p>	<p>2023 – Now called 'Plastac Retro'.</p>
Carrer del Parlament		
<p>10</p>		
	<p>In 2012, this local flower store was distinguished by a traditional signage.</p>	<p>In 2022, the business model remained unchanged, with a more minimalist, sleek appearance that incorporated the use of English in the signage.</p>

12		
	2008 - – 'Cebado' A well known hairsalon chain in Spain	2022 the signage seems modified to achieve a more minimalist appearance.

Table 4: Own elaboration, June 2024

With regard to the same activities, namely the upgrading of signage, one can identify an inclination towards minimalist, streamlined designs, even opting for vintage, retro styles are a common element. The local number 18 on Andra Långgatan is a notable example, with the addition of the word "retro" to the sign.

Another noteworthy observation is the general improvement of eroding façades, where some previously had been spray painted by graffiti.

Local	Andra Långgatan	
18		
	2008 – run down and graffiti sprayed façade	2023 – Façade refurbished

Table 5: Own elaboration, June 2024

The visual signs in question are not merely a matter of aesthetics; they also serve to attract the new, often more affluent residents who move into gentrified areas. Such elements are designed to align with the preferences and expectations of these new residents, thereby contributing to the evolving identity of the neighborhood.

DISCUSSION AND CONCLUSION

During the qualitative analysis, another marker was identified in the evolution of restaurant terraces and outdoor seating. In Gothenburg, Sweden, despite the limitations imposed by the harsh weather during late fall, winter, and early spring, there is a strong inclination towards utilizing outdoor serving spaces for restaurant activities. This practice is particularly prevalent during the late spring, summer, and early fall months, when the weather is more favorable. The motivation behind this trend is thought to be the aspiration to achieve a "Mediterranean look," which is believed to bring increased dynamism and vibrancy to the urban environment. This is exemplified by the experience of many Swedes when visiting Southern European Mediterranean countries and cities. This cultural shift towards outdoor dining spaces is intended to enhance the city's social and aesthetic appeal, in a manner similar to that observed in Mediterranean cities in Southern Europe. The objective is to create a more lively and engaging atmosphere in public spaces.

It is well documented that tourism plays a significant role in the gentrification of Southern European cities, such as Barcelona, where neighborhoods are often transformed into tourist hotspots, which leads to the displacement of local residents and businesses. (Casado M, Blanco A, Lopez-Gay, A, under revision) While tourism also impacts Northern European cities, the effects are less pronounced compared to those observed in Southern European cities. Northern cities tend to prioritize the creation of mixed-use developments that integrate residential, commercial, and green spaces, which serves to mitigate some of the adverse effects of gentrification. (Nickayin et al., 2020) However, this study has demonstrated that two distinct streets in different parts of Europe have undergone a comparable gentrification process, in terms of commercial activities and the aesthetic markers of these activities.

The findings of this study highlight several intriguing aspects of gentrification that require further discussion and exploration. Firstly, the similarities in commercial and aesthetic changes in Andra Långgatan and Calle del Parlament suggest that gentrification follows a somewhat universal pattern, regardless of cultural and geographical differences. This prompts the question of the driving forces behind these changes and whether global economic trends, cultural shifts, or policy decisions are the primary influencers.

Secondly, while the aesthetic markers and types of businesses that emerge in gentrified areas appear to converge, it is essential to consider the unique local nuances that persist despite these overarching trends. For example, the continued presence of tapas bars in Carrer Parlament, Barcelona, in contrast to the variety of international cuisines in Gothenburg, reflects the retention of cultural elements despite the effects of gentrification.

Furthermore, the utilisation of Google Street View as a research tool presents a potential avenue for future studies. Its capacity to provide historical imagery and facilitate large-scale, longitudinal analyses makes it a highly effective tool for urban studies. Future research could be expanded to include additional cities and a broader range of factors, such as environmental changes and traffic patterns, in order to provide a more comprehensive understanding of gentrification.

Finally, the aesthetic homogenization observed in gentrified areas raises questions about the long-term sustainability of these trends. The question thus arises as to whether the uniformity of urban landscapes will result in a loss of diversity and uniqueness that defines cities. An

investigation into the long-term cultural and economic consequences of this aesthetic transformation could provide valuable insights into the future of urban development. While this study provides a foundational understanding of the aesthetic and commercial impacts of gentrification in Gothenburg and Barcelona, it opens up numerous avenues for further research. By delving deeper into the drivers, impacts, and future implications of gentrification, researchers can contribute to more sustainable and inclusive urban development practices.

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