

## Visual and aesthetic markers of gentrification: agency of mapping and tourist destinations

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### Abstract

Framed within the context of contemporary place making and the urban tourism destination, a novel trans-disciplinary approach to mapping and interpreting gentrification and cityscape change is presented. A combination of multi-scalar cartographic and visual techniques including Google Street View (GSV) and geo-tagged images (Photo Sphere), is applied within the setting of Valletta, Malta, to convey cartographically the dynamism of urban transformations and detect tourism-led gentrification in a rapid way through the identification of the visual and aesthetic markers of gentrification. Utilising a critical approach, such map-making can inform and transform the understanding of the processes underpinning urban change and their cartographic and visual representation. It identifies and highlights issues of image and street-level 'realities' for both (re)imagining and marketing place. Individual tourists are able to access and utilise GSV and other mobile digital imaging and cartographic tools, as well as social media, to create their own, potentially counter, place-imaginaries and interpretations of urban change, thereby encouraging and/or discouraging visiting the city.

**Keywords** Place making; urban tourism; cityscape change; aesthetics; mapping; gentrification; urban morphology; Google Street View (GSV); Valletta; Malta

## **Introduction**

This study presents a novel trans-disciplinary approach to mapping and interpreting gentrification and cityscape change. It explores how the place making of cities may be envisaged, recorded, mapped and used in tourism place making. It offers a novel conceptual and empirical approach, which positions processes associated with gentrification and tourism gentrification *within* a place making and tourism focused context. In adopting an approach using visual-spatial mapping of the cityscape of Valletta, the capital city of the Mediterranean city-island-state of Malta, alternative perspectives on urban change across time and space will be revealed. The techniques used incorporated Google Street View (GSV), Photo Sphere, and digital cartography (Pavlovskaya, 2016), to scope and develop a mapping technique for the rapid recording and assessment of micro-level streetscape change. It also allows rapid detection of where gentrification is taking place. We move beyond traditional methods of measuring gentrification, such as those based on census analytics and socio-economic indicators (Gauci, 2019), which tend to capture gentrification when it has been completed and impacted on city neighbourhoods and people.

The mapping approach developed is positioned within the conceptualisation of aesthetic common sense as an overarching driver for cityscape transformation and (tourism) place making (Speake, 2017b; Speake & Kennedy, 2019b). This specific framing of the changing urban aesthetics under neoliberal capitalism, positions this alternative and inclusive perspective on processes and characteristics, usually labelled as the largely discrete entities of gentrification (Lees et al., 2016; Philips, 2018) and touristification (Freytag & Bauder, 2018; Guillemard & Lapointe, 2017). Through this lens, we reflect on the implications of presenting such cityscape change in cartographic form, its relationship to the authors' overall conceptualisation of place making in the development of urban tourist destinations, and implications for urban tourism development.

## **Cityscape change, aesthetics, gentrification and place making**

Observing and interpreting the visual signs and signifiers of urban change is an inherently multi-faceted and multi-disciplinary activity (Jansson & Lagerqvist, 2009; Speake, 2017b; Speake & Kennedy, 2019a, 2019b). Integrating diverse extensive and separate silos of literature, which traditionally typify the broad area of urban place making and aesthetics, underpins this work. The synthesis of conceptual and empirical material from tourism and place making (specifically Lew, 2017) and touristification (Sequera & Nofre, 2018), cultural and political economy focused gentrification (Lees, 2008, Philips, 2018; Zukin et al., 2015), urban aesthetics (Baggio & Moretti, 2018; Berleant & Carlson, 2007; Speake, 2017b) and visual-mapping, cartographic settings and

techniques (Pavlovskaya, 2016), provides the background for this study. Given the diversity and, in some instances (such as gentrification and aesthetics), the extensive canon of academic sources, for the purpose of this paper, the material which informs our conceptual framing is highlighted.

There is clear evidence that many urban tourism destinations across the world are currently experiencing the impacts of rapid aesthetic and functional change (e.g. González-Pérez (2019) on Palma, Majorca, Spain; Jover and Díaz-Parra (2019) on Seville, Spain; Cummings (2016) in Rio de Janeiro, Brazil). In many places, these changes are occurring under conditions of neoliberal capitalism. Neoliberalism, which emerged in the 1980s, was a response of political and socio-economic elites to declining levels in the accumulation of capital (Brenner et al., 2010; Harvey, 2007). In the subsequent years, the emphasis has switched from capital accumulation through production to the consumption of assets, including property (Weber, 2002, 2010) and the speculative profit-making motives of speculative investors.

In this context, gentrification is defined as ‘the process by which central urban neighborhoods that have undergone disinvestments and economic decline experience a reversal, reinvestment, and the in-migration of a relatively well-off middle- and upper middle-class population.’ (Smith, 1998, p. 198). Gentrification encompasses physical change and reinvention in the built environment (Zuk et al., 2018), and processes of gentrification have moved beyond the residential market to include tourism and retail related dynamics of urban transformation (González-Pérez, 2019; Jover & Díaz-Parra, 2019). Underpinning recent tourism gentrification have been increased global flows of mobile capital, financialisation, speculation and the associated accumulation of wealth (Aalbers, 2019; Cocola-Gant & Gago, 2019). Gentrification in its multiple forms, including tourism gentrification, is embedded in both global and local processes, especially in the current era of worldwide ‘planetary’ gentrification (Lees et al., 2016).

Given the rapidity of current cityscape change, including gentrification, the development of ways of observing, recording, mapping and reporting, to inform and enlighten understanding of it are important (Larkham, 2018; Speake, 2017a). Visual dimensions connect and underpin map creation, place making and the aesthetics of cityscape (Hom, 2020; Ilic et al., 2019). There have been recent calls for developing mapping techniques to capture more than just glimpses of place-changing *in progress*, particularly to identify visual and aesthetic changes *taking place*.

There is extensive trans-disciplinary literature on place making in which the term has many

definitions. Place making encompasses the processes of 'placemaking' and 'place-making' (Dupre, 2019). 'Placemaking' is 'a deliberate and purposeful approach to place creation' (Lew, 2017, p.450), exemplified by top-down structural approaches in for example, urban design and planning (Wyckoff, 2014). 'Place-making' (Hultman & Hall, 2012; Lew, 2017) is created by bottom-up human agency initiatives in which, for example, as consumers of place tourists are co-performers in place-making (Everett, 2012). Following Speake and Kennedy (2019b), 'place making' is understood as an inclusive and holistic concept describing place making actions undertaken in tourism destination planning and marketing, which are 'intended to shape the image and imageability of a place' (Lew, 2017, p. 448) and, importantly, combine elements of structure and agency.

### **Visual and cartographic mapping of cityscape change**

As Ilic et al. (2019, p. 2) have noted, aesthetic changes are frequently not considered even though 'they are the primary external indicator of the process [of gentrification]'. Similarly, Summers (2020) has observed that aesthetics are an integral part of gentrification, not a by-product of it, that aesthetics underpin rapid gentrification, and that the relationship between aesthetics and urban processes is increasingly recognised.

Such approaches build on the long tradition of utilising visual approaches in the study of urban change (Berghauser Pont et al., 2020) and tourism gentrification and place making studies (Cocola-Gant, 2018a, 2018b; Dupre, 2019). This tradition of classifying, recording, and mapping morphology and urban fabric is associated with temporal and spatial change (Conzen, 1960), alongside processes of place making and identity (Li et al., 2020). Xie and Gu (2018), assert categorically that morphology goes hand in glove with tourism. Many studies which have mapped the temporal dimension of urban change have used underpinning concepts of cycles to explain change in the built fabric (Venerandi et al., 2014; 2017). Such work is exemplified through Conzen's (1960) study on the 'burgage cycle', a progressive cycle in which during socio-economic growth, the backyards of plots are infilled and densified, and in which during socio-economic decline, demolition of buildings lead to de-densification (Berghauser Pont et al., 2019). These ideas of the cyclical character of urban change are complemented by more recent work on gentrification which identify it as a characteristic of urban change (e.g. He, 2019; Venerandi et al., 2014, 2017). In applying these perspectives, it is clear that the morphology of cities presents an eclectic mix of current and earlier 'waves' or phases of both general urban renewal and gentrification processes (He, 2019; Ilic et al., 2019).

Moreover, visual signs and signifiers (Zukin et al., 2015; Hom, 2020) and aesthetic markers (Pierce

& Hankins, 2019; Rendell, 2017) in the built environment provide indicators of gentrification over time, which we refer to as 'gentrification style markers'. These include muted colour palette, internationally replicated pattern-book design applied to refurbished traditional buildings, revitalisation of new-build developments, styled-for-status design (Hom, 2020; Speake & Kennedy, 2019b), and markers of property improvement such as repair, repainting and ornamentation (Ilic et al., 2019). These present the dominant styles of gentrification at the time (Speake & Kennedy, 2019b). This background provides the context for our observation, assessment and interpretation of the gentrification style markers in Valletta's built environment.

It is important for there to be rapid mapping and other techniques which reveal change over time. The speed of place-changing in Malta, as elsewhere, can be very swift (Speake, 2017b; Speake & Kennedy, 2019 a, b) and there is increasing focus on locating gentrification through time and space (Giorgetta, 2017; Holm & Schulz, 2018; Preis et al., 2021). In 2018, when our project started, two clear themes were identified in the literature: the importance to map and record *current* cityscape change; and that it is demanding and difficult to achieve.

### **Mapping gentrification**

Recent research on mapping gentrification has tended to be either wide-ranging overviews (Easton et al., 2020; Preis et al., 2021), or deep mapping and big-data, including GSV (Ilic et al., 2019). Our work is distinctive in its framing of the processes associated with gentrification and tourism gentrification *within* a place making and tourism focused context and in mapping at the micro-scale in Valletta. The value of mapping of small areas is increasingly (re)recognised as providing informative insights into urban change, as the current pre-eminent focus on big-data starts to be contested (Bloch, 2020; Loukissas, 2019). Similarly, Yonto and Schuch (2020) have called for gentrification research to be informed by local context and gentrification analysis at the smaller scale. They also encourage reflection on the validation of existing models of gentrification through the 'ground truthing of local conditions'. Holm and Schulz (2018 p. 255) observed that 'growing availability of novel sources of data means that future efforts to map gentrification may need to evolve beyond earlier academic models.'

One of the features of mapping, when undertaken utilising a critical approach, is its propensity to be transformative, which can occur on multiple-levels. This can include (re)readings and (re)interpretations made possible through critical map design choices of the map maker. It may also be the disclosure of previously unrevealed information, which motivate real-world response and

action. In effect, maps can be read/interpreted beyond cartographic depiction. As expressed by Corner (1999, p. 228), mapping 'discloses, stages and even adds potential for later acts and events to unfold'. Hence, mapping cityscape can reveal specific information about the present built environment which may act as a trigger for action by stakeholders in place making and others (see for example Monteiro, 2020). In other words, creating a map is a process which opens up opportunities for the (re)envisioning and (re)interpretation of the mapped space or place and for challenging pre-existing perspectives of it/them.

### **Digital mapping and tourist use of cartography**

The widespread availability of open-source, freely available digital mapping tools (Pavlovskaya, 2016) has opened up new opportunities for more people to create their own maps (the democratization of cartography) (e.g. Bosse, 2020; Sacco & Vella, 2017). Studies have begun to explore digital place making (Koning, 2015; Pavlovskaya, 2016) and uses of GSV (Gilge, 2016; Martinez-Hernandez et al., 2021). Kuehn and Daubs (2020) recognise the importance of 'digital tourism destinations' and tourists' increased engagement with social media when making decisions on visiting destinations. They also note that tourists tend to trust Google and its mapping/visual imagery. Portella (2016: xxiii) reports how tools such as GSV 'have just completely changed the way people see places and created a mental image of them as well as the way we do research'. For work using visual images and mapping, Scholtes (2019) has coined the term 'photocartographica'. All forms of mapping can therefore provide both a symbolically, tangibly grounded resource with agency, as well as the potential to inform, motivate and activate transformation and decision making by tourists to visit a destination.

We assert that it is the visual which connects and underpins map creation, place making, gentrification, and the aesthetics of cityscape. The identification of the visual aesthetics of the affluent through gentrification style markers (e.g. architectural form, colour palette) in the built environment provide a means of mapping the resultant cityscape (and change therein). Importantly, this approach enables gentrification which is often discerned through its aesthetic markers (Philips, 2018; Rendell, 2017; Zukin, 2010) to be encompassed within it.

In utilising a visual-cartographic approach we aim to throw light on the hitherto little, or un-illuminated visual and aesthetic elements of dynamic urban transformation and gentrification, which we illustrate through the lens of Valletta.

## Valletta, Malta: an historic cityscape in transition

Valletta (*Il-Belt*) is the historic capital city of Malta serving as the commercial, financial core of the state and *de facto* tourist and transport hub of the country (Main et al., 2021). Valletta is a small and compact city with an area of 0.84km<sup>2</sup> and population of 5,784 at the time of the Census in 2011 (National Statistics Office, 2012). More recent estimates suggest a small population increase to 5,891 (National Statistics Office, 2021). It is a popular tourist destination. In 2018, 2.37 million (91.3% of visitors to Malta) visited the city with 260,000 staying in the Valletta area (Valletta 2018 Foundation, 2019). In the era of the post-mass tourist, Valletta is being repositioned up-market (Ashworth & Tunbridge, 2017; Malta Tourism Authority, 2019; Speake & Kennedy, 2019b). The city has UNESCO World Heritage Status (Dimelli, 2019; Ebejer, 2019) and attractive visual aesthetics attributable to its mix of historic built environment and blue-scape harbour settings. All coalesce to create the city's unique character and key selling point (Malta Tourism Authority, 2019). Its historic core and cultural amenities have an undoubted 'pull' for tourists and for others investing mobile capital in tourism and residential ventures (Ebejer et al., 2019; Markwick, 2018).



**Figure 1.** Aerial view of Valletta, Malta, 2021. Showing the distinctive 'grid-iron', fine-grained form and densely built-up character of Valletta. This morphology dates from the 1565 design of Francesco Laparelli, commissioned by Grand Master Jean de la Vallette, after whom the city is named. Since 1980 Valletta has been designated as a cultural UNESCO World Heritage Site. Source. Google Earth, 2021.

After decades of population decline, from 20,000 after the Second World War to 6,000 in 2017 (Baker, 2018) and diminished quality of much of its urban fabric (Theuma, 2004), in the last ten years

the city has undergone rapid regeneration. This has been due to a combination of the structural top-down placemaking of architects and planners and the human agency of consumer and other co-producers' place-making (Speake & Kennedy, 2019b). This has included elements broadly termed residential gentrification, and those with a clear commercial, cultural and tourism gentrification dimension (Ashworth & Tunbridge, 2017; Dimelli, 2019). The major driver has been both inward overseas and Maltese investment in property in the city (Ebejer, 2019, 2020; Speake & Kennedy, 2019 a, b). In part, this was encouraged through its role as European Capital of Culture 2018, which raised its international visibility to tourists as well as to commercial and residential investors and developers. The impacts of both have been highlighted by Markwick (2018a, 2018b) within the context the repositioning of the city's brand to attract up-market, niche tourism. Cultural amenity dimensions linked to European Capital of Culture 2018, and their mapping, in Valletta and Malta, have been widely researched (Attard & Azzopardi, 2015; Cremona, 2018; Sacco & Vella, 2017; Zammit & Aldeiri, 2019).

In 2017, although 23% (833) of all dwellings in the city were reported as vacant (Dimelli, 2019), affordable property in Valletta has become scarce and property prices have soared, along with demand (Frank Salt, 2020). Consequences have included burgeoning luxury apartments and townhouses above the €1M mark (Frank Salt, 2020). Between 2011 and 2014, a 100% increase in floor-space for tourism accommodation and commercial uses, included tourism related functions such as prestige bars, restaurants and luxury stores in Valletta (Malta Government, 2016). Between 2013 and 2018, of an estimated €167 million investment in Valletta 16% was tourism related and 5%, 2% and 47% was in food and drink, retail and heritage respectively (National Statistics Office, 2018). A feature of the tourism-led property development has been encouragement of upscale and luxury hotels through government grants and a surge in the number of boutique hotels (Malta Government, 2016; Malta Tourism Authority [MTA], 2019). Between 2014 and 2017, 20 planning applications for boutique hotels in Valletta were approved and there has been no slowdown in demand for them (Debono, 2019). In June 2020, online searching (including Google and Trip Advisor) revealed c. 28 boutique hotels/aparthotels in the city (out of c. 128 hotels/aparthotels and guesthouses). Such initiatives have contributed to the re-use and renovation of buildings, the city's revitalisation and indicate a clear tourism related steer and focus.

## **Methodology**

The methodology that follows provides the context for understanding agency and place making, and the speed and trajectories of change on the ground (i.e. land use, functional, and aesthetic change). It uses both secondary and primary baseline data for the spatial analysis and records visual signs,



The classifications and terminology for the map (Table 1) were adapted from the San Francisco Bay gentrification study (University of California Berkeley, 2015). The reason for its choice was the distinctiveness of the classifications and that they are process driven rather than function driven, for example 'undergone', 'undergoing' gentrification, 'at risk' and 'not at risk' of gentrification. These categories also accord with other recent surveys, which adopt similar process-focused terminology in their classifications, particularly Preis et al. (2021) who also use the term 'risk of gentrification'. We utilise these categories at the resolution of individual buildings, since Valletta is small and compact.

The categories used focus specifically on the typical gentrification style markers which have come to be associated with the visual and aesthetic characteristics of gentrification. These include internationally replicated pattern-book and styled-for-status design, use of a restrained colour palette, and improvements to property such as repair and redecoration. The framing of the categories within the context of 'contemporary' signs and signifiers of gentrification, refers to such typical characteristics within the various waves of gentrification over the last ca. five decades (see Sklair, 2017; Speake & Kennedy, 2019b; Zukin, 2010).

Studies of gentrification, tourism gentrification and wider urban revitalisation issues in Valletta (Ebejer, 2013, 2019; Gauci, 2019; Markwick, 2018a, 2018b; Sacco & Vella, 2017), suggest that various forms and waves of gentrification have taken place in the city, but that gentrification has become more common during the last decade. It is not the purpose of our survey to identify visual and aesthetic evidence of individual waves of gentrification through time, but to identify the accumulated, overall visual and aesthetic evidence of gentrification in the built fabric at the chosen points in time, for subsequent comparison, analysis and contextualisation within our overarching framing of gentrification, place making, tourism and aesthetics.

The identification of the visual and aesthetic markers of gentrification in the built fabric of Valletta was undertaken through observation. Systematic observation of the built environment focused on recording building characteristics as seen from the street (see Berghauser Pont et al., 2019), from both real-world data collection in city and from GSV. Using the street as an 'observing-platform' facilitated the viewing of buildings along the 'street edges' (Venerandi et al., 2017) of the city blocks. We recognise that cycles of urban transformations occur within plots which subsequently impact on blocks. The resolutions of blocks, half and quarter blocks were chosen largely because Valletta has a fine-grained, grid-iron morphological structure (Chapman, 2006;

Chapman & Cassar, 2004), which meant that a block-by-block survey based on survey of buildings at the street edge was logical, appropriate, and practical (see Figures 1 and 2).

**Table 1.** Visual signs and signifiers of the process of gentrification.

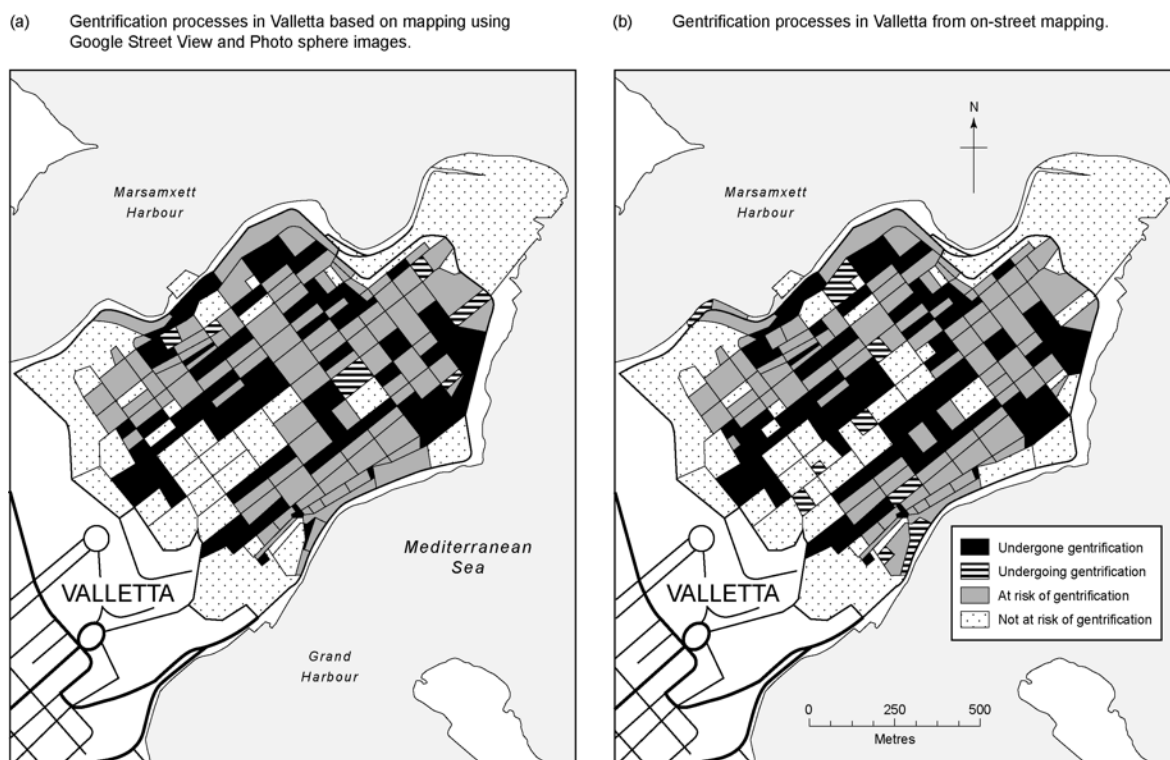
|                              |   |
|------------------------------|---|
| 1. Undergone gentrification  | Buildings or blocks that have contemporary architectural and cultural signs and signifiers. Including the aesthetic markers of largely styled-for-status upmarket retail stores, upmarket bars and clubs.       |
| 2. Undergoing gentrification | Buildings or blocks with scaffolding, building work done during the time of visit, or areas with notices of plans for development on the building and aesthetic signs and signifiers of up-market construction. |
| 3. At risk                   | Any building or block not in categories 1,2,4, in particular, vacant properties, rundown and derelict buildings.  |
| 4. Not at risk               | Buildings or blocks which are predominantly historic (including baroque and other traditional styles (associated with, for example, government and religious functions).  |

*Note:* The term ‘at risk’ is used within the context of this study’s utilisation of a critical approach. However, some stakeholders involved in the property-led development elements of gentrification and placemaking may see it as an opportunity rather than risk.

Authors’ own based on University of California Berkeley (2015).

Within the Valletta study area each building along the city’s street edges was observed and assigned into one of four categories shown in Table 1. The buildings were also viewed from the ground floor to the top floor with the dominant category being assigned. We acknowledge that there are instances when individual floors (storeys) have different visual markers and aesthetics which vary between adjacent and neighbouring buildings, but for our purposes the fine detail informed the broader categorisation at the resolution of each half block. Whilst we recognise that this is a broad classification technique that can mask detail, it is a relatively rapid technique to use and can be done off-site. These blocks in the city, and the category to which they were assigned were then digitised on ArcMap 10.2. The resultant choropleth map is presented in Figure 3(a).

Following this, in February 2018, on-street mapping of Valletta was conducted. This included the main streets as well as side-streets to which GSV did not have access. This survey used as its base map the same Google Map used in the GSV/Photo Sphere informed mapping. The in-field, on-street mapping allowed more detailed observation of the processes of gentrification. It also facilitated evaluation of the nature of any observed change that took place in the 16-month period between the Google Maps data based mapping (mostly from 2016) and the in-field observation in 2018. Accuracy was increased to quarter block resolution of earlier desk-based GSV/Photo Sphere informed survey, see Figure 3(b).



**Figure 3.** Spatial patterns of gentrification processes in Valletta, Malta.

Sources: Esri, DeLorme, HERE, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, and the GIS User Community. (a). This map is presented at half block resolution and shows the result of the desk based study using Google Maps, Google Street View and Photo Sphere. (b). A quarter block resolution map of gentrification in Valletta following detailed on-street mapping.

## Results

The mapping of Valletta, based on GSV and geo-tagged photographs (Photo Sphere), displays its results within half blocks (subsequently referred to as blocks). In each block, each category of the gentrification process was counted and analysed, the results of which are presented in Table 2.

**Table 2.** Valletta: Processes of gentrification using visual signs and signifiers 2018 (based on Google Street View and Photo Sphere images largely dating back to 2016).

| Classification                   | Number of blocks | Percentage of total blocks |
|----------------------------------|------------------|----------------------------|
| 1. Undergone gentrification      | 55               | 30.40                      |
| 2. Undergoing gentrification     | 6                | 3.3                        |
| 3. At risk of gentrification     | 91               | 50.28                      |
| 4. Not at risk of gentrification | 29               | 16.02                      |
| Total                            | 181              | 100                        |

The key feature of our data is that, on the observation, identification and assessment of the visual and aesthetic markers of gentrification, a third of the city blocks had undergone, or were undergoing

gentrification, with a further half being 'at risk'. It provides clear evidence of a transforming city centre.

When these data are placed in their locational context (Figure 3a), a distinctive spatial distribution of these transformations is revealed. The majority of the blocks which have 'undergone gentrification' are adjacent to the city's historic, monumental core centred on City Gate (*Bieb il-Belt*), Republic Street (*Triq Ir-Repubblika*) and Freedom Square (*Pjazza Helsien*) to the south west and also Fort St Elmo (*Forti Sant'Lermu*) to the north east. They are particularly concentrated in Merchants Street (*Triq il-Merkanti*), St Paul Street (*Triq San Pawl*) and Strait Street (*Triq id-Dejqa*). These areas are also those displaying tourism-related gentrification, such as boutique hotels and up-market retailing and hospitality.

The blocks categorised as 'undergoing gentrification' are six in number and dispersed, but largely within the historically residential areas to the east of the peninsula. These locations too have much of cultural and heritage interest to visitors to the city such as the Grand Master's Palace, St John's Co-Cathedral, National Museum of Archaeology, and Auberge de Castille. It is the areas in the north east and south of the city which predominate in the 'at risk' category, and those which are currently with less visible evidence of tourism-focused building use change.



**Figure 4. Vertical gentrification in Valletta, Malta, 2018.**

Showing the process of vertical gentrification in Valletta, the ground floor has 'undergone gentrification' and is renovated with the floors above being in a state of disrepair and 'at risk of gentrification'.

A further characteristic of the distribution is also the juxtaposition of categories, for example, between ‘at risk’ (often associated with vacant, dilapidated buildings) and ‘undergone gentrification’ (typified by styled-for-status) renovations. This is both at the block and intra-block level. The contrasts are often also evident between street level and upper floors (Figure 4). All of these contribute to visual and functional ‘jarring’. This is exemplified in Lavant Street (*Triq Lvant*) and Quarry Wharf (*Triq Xatt-il Barriera*), where dilapidated buildings predominate, despite the prominence of Victoria Gate and proximity to the Upper Barrakka Gardens (*Ġnien ta ‘Barrakka ta’ Fug*) and Grand Harbour (*Port il-Kbir*). Moreover, alongside visual and aesthetic consequences of the processes of the gentrification on the built environment, there have been serious social repercussions, which are explored in the discussion.

The on-street mapping survey of Valletta provided support for the information collected and mapped using GSV and Photo Sphere and the resultant patterns (Figure 3b; Table 3). It demonstrated that GSV and Photo Sphere gave a broadly accurate representation and reflection of the gentrification processes taking place in 2016.

**Table 3.** Valletta: Process of gentrification using visual signs and signifiers (on-street survey, 2018).

| Classification                   | Number of blocks | Percentage of total blocks |
|----------------------------------|------------------|----------------------------|
| 1. Undergone gentrification      | 64               | 30.40                      |
| 2. Undergoing gentrification     | 10               | 5.05                       |
| 3. At risk of gentrification     | 90               | 45.46                      |
| 4. Not at risk of gentrification | 34               | 17.17                      |
| Total                            | 198              | 100                        |

However, there were some changes as can be seen in Figure 3b. In general, these related to the completion of existing development projects and the start of new projects. All of the blocks ‘undergoing gentrification’, according to the GSV information, had been finished and were in a different category. The on-street mapping revealed that there were 10 new blocks ‘undergoing gentrification’, including MUŻA (National Museum of Art on *Triq il-Merkanti*) and Valletta Design Cluster in *Il-Mandraġġ*. These major projects were not disclosed in the GSV survey. The ‘undergone gentrification’ category is the best indicator for examining the spatial patterns of gentrification within the city. In a space of 16 months, 1.98% of the city was converted to an area which has ‘undergone gentrification’. Given that Valletta’s area covers 55.5ha (UNESCO, 1980), the figures suggest that 1.1ha of land was gentrified in just 16 months.

Thus, GSV and Photo Sphere based mapping can provide data which can be used to produce accurate, informative mapping of the processes of gentrification and urban change. However, the

work has also demonstrated that over the 16 months researched, there had been changes in the processes of gentrification taking place, mostly in terms of both completed and new projects. Importantly, some of these changes would not be evident to people using GSV and Photo Sphere as their major/sole source of visual information on Valletta's cityscape after Google's mapping of the city in October 2016. Other than some updated Photo Sphere images of the most central part of the city in and around Republic Street, tourists and others in 2021 still see the images of the streetscape from 2016. The results indicate the need for regular and frequent updating by GSV of the whole city of Valletta in order for its more accurate visual portrayal.

## **Discussion**

The resultant mapping of the visual and aesthetic indicators of gentrification in buildings reveals the outcomes of gentrification processes in Valletta. The visual and aesthetic markers of gentrification present a visible representation of processes of urban change, which are underpinned by the stylistic and aesthetic preferences of the affluent elite and aesthetic common sense. Through the utilisation of aesthetic common sense, we identify the role of the aesthetics of the affluent elite in gentrification, cityscape change and tourism place making, within a wider setting of urban place making. This is well illustrated in the revitalisation of the south-west section of Merchants Street, including the MUŻA National Museum of Art (*Mużew Nazzjonali tal-Arti*); the Covered Market (*Is-Suq tal-Belt*), with its high-end food outlets (Speake & Kennedy, 2019b); and in the north-east of the peninsula, the Valletta Design Cluster (*Il-Biċċerija l-Antika*).

Sacco and Vella (2017, p.1) in their paper on cultural mapping in Valletta, argued that it is 'only through mapping that it becomes possible for experts, policy makers, and practitioners, to develop a sound understanding of the spatial, organizational articulation of such activities, and to lay the premises for extrapolating future trends.' More widely it is reported that mapping gentrification provides an 'early warning toolkit' of susceptibility to gentrification (Chapple, 2009; Chapple & Zuk, 2016) and by extension, to visual and aesthetic change. Our mapping approach provides a means of identifying gentrification quickly.

Gentrified/regenerated cityscapes are often used as levers for city (re)imaging. These cityscapes, with their building renovation, make-overs, and improvements to the wider urban environment, often appear in city (re)branding and marketing (e.g. Rius Ulldemolins, 2014; Speake & Kennedy, 2019a, b). Such imagery can project cities favourably as aesthetically appealing to attract tourists and tourism related activities. There is extensive literature on the creation of destination image

(Beerli & Martin, 2004; Frías et al., 2008; Kim & Chen, 2016), and of how place imagery contributes to urban destination branding and marketing (Bonakdar & Audirac, 2020; Shirvani Dastgerdi & De Luca, 2019). Kavaratzis (2004) asserts there are three dimensions to brand communication: (1) visible and physical elements of the city, (2) advertising tools used for marketing, (3) media and people's communications about a city. Our study covers elements of these as they relate to buildings and urban fabric, visual images, representation of change, and people's mediated engagement with cityscape.

Some established branding and marketed projections of cities repeat the use of specific imagery to influence tourists' imaginaries, perceptions, and expectations of urban destinations. This is well-exemplified by the panoramic image of Valletta across Marsamxett Harbour from Sliema and Tigné Point which is widely used in marketing Valletta and Malta (Speake, 2017b). It presents a (relatively) 'stable' signifier of Valletta as a historic, cultural and aesthetically attractive city to visit, yet it masks the localised, varied aesthetic detail of Valletta streetscapes which visitors to the city will encounter. These may include recently completed regeneration projects such as the Parliament House (*Dar il-Parlament*) and Covered Market, and areas which have not (yet) been revitalised.

In contrast, transforming areas, or those about to change, may pose marketing opportunities and challenges. Opportunities include the chance to reposition, re-image and re-brand. Challenges may include impacts on 'official' pre-imagined, marketed projections of place and of the tourist's imagined place expectations and real-life encounters. We acknowledge that general aesthetics of a historic area is one part of destination image. However, in an increasingly visually and consumption orientated world, we are beginning to see how, via digital platforms such as GSV, images of buildings and small areas convey destination images, which may impact on potential visitors' perceptions of place. Kavaratzis and Ashworth (2010), amongst others, note a potential for tension between established stable imagery, in contrast with realities of a city. For example, when it is in the process of transformation, with its associated building work and juxtapositions of renovated and rundown buildings.

We argue that Google Maps and GSV are globally accessible, free resources for users and that the aesthetic juxtapositions and tensions they reveal are also readily available to potential tourists (for example via social media), should they choose to look. Tourists are increasingly turning towards social media for information on destinations they (may want to) visit, both pre-and post-visitation (Jansson, 2019). Hence, they are becoming actively engaged with the mediatization of destinations

through the use of Google Maps, Google Trekker and Tripadvisor (Kuehn & Daubs, 2020; Munar & Jacobsen, 2013).

In Valletta, the juxtaposition of up-market boutique hotels and dilapidated, vacant properties are clearly shown in GSV and geo-tagged images and may discourage would-be visitors. Moreover, since Google Maps and GSV are not always up-to-date, as in the case of Valletta and elsewhere (Curtis et al., 2013), tourists may make decisions about whether to visit on the basis of out-dated images and other marketing information. An example from Valletta, which illustrates such visual disparities and anachronisms, is the case of Triton Place and its centrepiece the Triton Fountain (*Il-Funtana tat-Tritoni*). The GSV image from October 2016 shows a rundown space adjacent to the old bus station, in comparison to a 2018 photo of a completely remodelled, up-scale public open space (Figure 5). The adjacent bus station has also been upgraded and redesigned (Satariano, 2021). Although there are fixed video-cams which provide near real time imagery and some more recent Photo Sphere, geo-tagged images, these are far more restricted in areal extent than GSV. We argue that the provision of up-to-date accurate cityscape imagery has/should become an important dimension of urban destination marketing to minimise raising and subsequently (possibly) dashing visitor expectations.



**Figure 5. Triton Square and Triton Fountain, Valletta.**

(a). Google Street View image from October 2016 showing Triton Square as a rundown space adjacent to the bus station. (Source: Google. Image capture. September 2016. ©2020 Google.) (b). Image of the remodelled Triton Square and Triton Fountain, February 2018. The bus station (to the right of this image – not shown) has also been upgraded.

In the case of Valletta, our results indicate that a third of the city has been gentrified and revitalised, particularly areas adjacent to Republic Street, the city's main thoroughfare and historic government, administrative and retail centre. These rejuvenated locations are largely enclaved (Marcuse, 1985) with adjacent pockets of poverty (Speake & Kennedy, 2019b; Torpiano, 2016). The juxtaposition of blocks, which had contrasting development trajectories with polarised visual, functional and social characteristics is especially evident. At street level, disclosed juxtaposed and polarised levels of significant affluence and poverty are palpable.

The agency of mapping reveals and serves as a potential trigger for action to counter and tackle the evident issues of inequality and socio-economic disparity. These disparities are the challenging realities of Valletta, despite Valletta's overall aura of prosperity and upward economic trajectory. Valletta still has some of Malta's poorest housing quality, lowest incomes and highest levels of social disadvantage (Reljic, 2017; Torpiano, 2016;) especially in the *Il-Fossa* and *Il-Mandraġġ* neighbourhoods. Within the dominant context of capitalistic market forces (Main et al., 2021) and with little focus on social policy and measures to alleviate poverty, polarisation grows apace.

Torpiano (2016) noted that 'What makes a city is its people, and in this respect, Valletta has lost a lot' and explains that Valletta's former atmosphere associated with 'hawkers, the cobblers, its small shops' has gone. Moreover, many families have left the city in search of a better quality of life. Remaining in the disadvantaged areas of the city is a slowly declining, ageing, dependent, population (Valletta 2018 Foundation, 2019). The likelihood is that triple displacement (Cocola-Gant, 2018a) of commercial and residential displacement to neighbouring towns will continue as Valletta gentrifies and repositions its tourism offer to meet the demands expectations of the (more) affluent elite.

The largely organic, somewhat *ad hoc*, and private investor led revitalisation of the past decade continues to be evidenced in the city's place making. The commercial tourism focused processes of gentrification contributing to population and displacement, are starting to be explored in Valletta (Ebejer, 2019; Speake & Kennedy, 2019b) and in other (predominantly) southern European urban tourist destinations (e.g. Cocola-Gant's (2018a) study of local resistance to the gentrifying impacts of the 'leisure class' and tourism in Barcelona; Sequera and Nofre's (2020) study of touristification and gentrification in Alfama, Lisbon).

## Conclusion

A major contribution of mapping, when undertaken utilising a critical approach, is its agency and propensity to trigger action and subsequent possible transformation. In this study, the visual appearance of buildings, focusing on the gentrification style markers has been used to identify, map and locate gentrification in progress.

Map creation can trigger reinterpretation of the mapped space or place and challenge existing perspectives. Maps have agency and can thereby function as catalysts for action. Preis et al. (2021) maintain that gentrification and displacement are important to urban 'administrators' in terms of public concern about neighbourhood change. There is also evidence that government investment in public infrastructure may generate or exacerbate gentrification (Chapple et al., 2017, Preis et al., 2021). In their observations, that an increase in mapping where gentrification 'has happened, is happening and may happen', Preis et al. (2021) suggest that such mapping presents evidence of trying to understand gentrification in order to: (1) change the dialogue between city and government, (2) assist in organizing against gentrification and displacement, and (3) promote changes in policy. Thus, in the context of this work, mapping transformations, which rapidly disclose the spatiality and visual attributes of cityscapes, offers] distinctive and alternative ways of viewing them. These have relevance for all key stakeholders in urban development, including in tourism planning, development and marketing.

We have shown how the changing aesthetics and morphology associated with gentrification and the place making of cities may be envisaged, recorded, mapped and used to inform our understanding of urban transformations from a tourism perspective. We have also adopted a trans-disciplinary approach to mapping and interpreting cityscape change, contextualised within critical theory. The use of a combination of multi-scalar cartographic and visual techniques, including GSV and geo-tagged images (Photo Sphere), applied within the setting of Valletta, allowed us to convey cartographically, the dynamism of cityscape change. It is a method which facilitates the rapid detection of tourism-led gentrification through the identification of visual and aesthetic markers of gentrification.

Moreover, we provide an example of gentrification and place making which is informed by local context and the analysis of these processes at the smaller scale. Such map-making can inform and transform the understanding of the processes underpinning urban change and their cartographic and visual representation. We assert that this encourages us, and those engaged in multiple facets

of urban tourism, first, to reflect on how place is 'officially' presented and marketed. This includes not only in articulating and projecting the up-market and the up-and-coming in tourist places and spaces, but also in recognising the co-existence of 'rundown'/vacant/derelict tourist places and spaces and the challenges of the latter. Secondly, that tourists' expectations of place may be influenced by global and local location-based apps and mapping services, beyond the reach of formal tourism promotional activities and websites. Thirdly, that potential visitors may see on-line the proximity of contrasting aesthetics and associated polarisations, to which they may be attracted, indifferent or repelled. Finally, there are often time-lags between when a place is mapped/visually imaged (e.g. Google Maps and GSV) and what is discernible in the present cityscape. There are myriad implications, notably how destination management organisations (DMOs) can respond effectively to the challenges of urban and digital information in (re)imaging and branding city and contribute to place making.

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#### **References**

- Aalbers, M. B. (2019). Introduction to the forum: From third to fifth-wave gentrification. *Tijdschrift voor Economische en Sociale Geografie*, 110(1), 1- 11.  
<https://doi.org/10.1111/tesg.12332>
- Ashworth, G.J. & Tunbridge, J.E. (2017). Multiple approaches to heritage in urban regeneration: the case of City Gate, Valletta. *Journal of Urban Design*, 22(4), 494-501.  
<https://doi.org/10.1080/13574809.2015.1133230>
- Attard, M. & Azzopardi, J. (2015). Cultural mapping: Tools to Engage. Cultural Mapping: Debating Spaces and Places. *Proceedings of the Second Annual Valletta 2018 International Conference on Cultural Relations in Europe and the Mediterranean* (pp. 45-

- 76). Valletta (2018) Foundation.
- Baggio, R., & Moretti, V. (2018). Beauty as a factor of economic and social development. *Tourism Review*, 73(1), 68–81. <https://doi.org/10.1108/TR-06-2017-0098>
- Baker, F. (2018). *Valletta is this year's European City of Culture. So what will a big award do to a small city?* City Metric. Retrieved from <https://www.citymetric.com/horizons/valletta-year-s-european-city-culture-so-what-will-big-award-do-small-city-3595>
- Berli, A. & Martín, J.D. (2004). Factors influencing destination image. *Annals of Tourism Research*, 31(3), 657-681. <https://doi.org/10.1016/j.annals.2004.01.010>
- Berghauer Pont, M., Stavroulaki, G., Bobkova, E., Gil, J., Marcus, L., Olsson, J., Sun, K., Serra, M., Hausleitner, B., Dhanani, I., & Legeby, A. (2019). The spatial distribution and frequency of street, plot and building types across five European cities. *Environment and Planning B: Urban Analytics and City Science*, 46(7), 1226-1242. <https://doi.org/10.1177/2399808319857450>
- Berleant, A., & Carlson, A. (Eds.). (2007). *The aesthetics of human environments*. Broadview Press.
- Bloch, S. (2020). An on-the-ground challenge to uses of spatial big data in assessing neighborhood character. *Geographical Review*, 110(1-2), 210-223. <https://doi.org/10.1111/gere.12357>.
- Bonakdar, A., & Audirac, I. (2020). City branding and the link to urban planning: Theories, practices, and challenges. *Journal of Planning Literature*, 35(2), 147-160. <https://doi.org/10.1177/0885412219878879>
- Bosse, A. J. (2020). *Cartographic Efficacy: Histories of the Present, Participatory Futures*. PhD thesis. University of Kentucky. Theses and Dissertations--Geography. 69. [https://uknowledge.uky.edu/geography\\_etds/69](https://uknowledge.uky.edu/geography_etds/69)
- Brenner, N., Peck, J., & Theodore, N. (2010). After neoliberalization? *Globalizations*, 7(3), 327–379. <https://doi:10.1080/14747731003669669>
- Chapman, D. W. (2006). Applying macro urban morphology to urban design and development planning: Valletta and Floriana. *Urban Morphology*, 10(1), 23.
- Chapman, D., & Cassar, G. (2004). Valletta. *Cities*, 21(5), 451-463. <https://doi.org/10.1016/j.cities.2004.07.001>
- Chapple, K. (2009). *Mapping susceptibility to gentrification: The early warning toolkit*. August. Center for Community Innovation, UC Berkeley. Retrieved from <https://communityinnovation.berkeley.edu/reports/Gentrification-Report.pdf>.
- Chapple, K., & Zuk, M. (2016). Forewarned: The use of neighborhood early warning systems

- for gentrification and displacement. *Cityscape*, 18(3),109–130.
- Chapple K, Loukaitou-Sideris A, Waddell P, et al. (2017). Developing a New Methodology for Analyzing Potential Displacement. Retrieved from <https://trid.trb.org/view/1464806>
- Cocola-Gant, A. (2018a). *Struggling with the leisure class: Tourism, gentrification and displacement* [Doctoral dissertation, Cardiff University]. ORCA Online Research @ Cardiff. <http://orca.cf.ac.uk/109288/>
- Cocola-Gant, A. (2018b). Tourism gentrification. In L. Lees, & M. Phillips (Eds.), *Handbook of gentrification studies* (pp.281-293). Edward Elgar Publishing.
- Cocola-Gant, A., & Gago, A. (2019). Airbnb, buy-to-let investment and tourism-driven displacement: A case study in Lisbon. *Environment and Planning A: Economy and Space*, 1-18. <https://doi.org/10.1177/0308518X19869012>
- Conzen, M. R. G. (1960). *Alnwick, Northumberland: Study in town-plan analysis*. Orge Philip and Son.
- Corner, J. (1999). The agency of mapping: speculation, critique an invention. In: Cosgrove D. (Ed.), *Mappings* (pp. 213-252). Reaktion Books.
- Cremona, V.A. (2018). Mapping culture and cultural interaction in view of Valletta 2018 European Capital of Culture (ECOC). *Journal of Mediterranean Studies*, 1, 1-13.
- Cummings, J. (2016). Confronting favela chic: The gentrification of informal settlements in Rio de Janeiro, Brazil. In L. Lees, H. B. Shin, & E. López-Morales (Eds.), *Global gentrifications: Uneven development and displacement* (pp. 81-99). Policy Press.
- Curtis, J. W., Curtis, A., Mapes, J., Szell, A. B., & Cinderich, A. (2013). Using Google Street View for systematic observation of the built environment: Analysis of spatio-temporal instability of imagery dates. *International Journal of Health Geographics*, 12(1), 53. <https://doi.org/10.1186/1476-072X-12-53>
- Debono, J. (2019, November 19). 'No decline' in Valletta market for boutique hotels. *Malta Today*. Retrieved from [https://www.maltatoday.com.mt/environment/townscapes/98695/no\\_decline\\_in\\_valletta\\_market\\_for\\_boutique\\_hotels#.Xt\\_rJC3Myrc](https://www.maltatoday.com.mt/environment/townscapes/98695/no_decline_in_valletta_market_for_boutique_hotels#.Xt_rJC3Myrc)
- Dimelli, D. (2019). Modern conservation principles and their application in Mediterranean historic centers – the case of Valletta. *Heritage*, 2(1), 787-796. <https://doi.org/10.3390/heritage2010051>
- Dupre, K. (2019). Trends and gaps in place-making in the context of urban development and tourism. *Journal of Place Management and Development*, 12(1), 102-120. <https://doi.org/10.1108/JPMD-07-2017-0072>

- Easton, S., Lees, L., Hubbard, P., & Tate, N. (2020). Measuring and mapping displacement: The problem of quantification in the battle against gentrification. *Urban Studies*, 57(2), 286-306. <https://doi.org/10.1177/0042098019851953>
- Ebejer, J. (2013). The quality of urban spaces in Valletta and their relevance to tourism. Paper presented at the Waterfront Project - International Seminar, 25th July 2013  
“Regenerating Maltese and Sicilian waterfronts: Perspectives from two Mediterranean islands” University of Malta.
- Ebejer, J. (2019). Urban heritage and cultural tourism development: a case study of Valletta’s role in Malta’s tourism. *Journal of Tourism and Cultural Change*, 17(3), 306-320. <https://doi.org/10.1080/14766825.2018.1447950>
- Ebejer, J. (2020). Case Study 1: Overtourism in Valletta – reality or myth? In H. Séraphin, T. Gladkikh, & Thanh, T. V. (Eds.), *Overtourism: Causes, implications and solutions* (pp. 107-128). Palgrave Macmillan. <https://doi.org/10.1007/978-3-030-42458-9>.
- Ebejer, J., Smith, A., Stevenson, N., & Maitland, R. (2019). The tourist experience of heritage urban spaces: Valletta as a case study. *Tourism Planning & Development*, 17(4), 417-458. <https://doi.org/10.1080/21568316.2019.1683886>
- Everett, S. (2012). Production places or consumption spaces? The place-making agency of food tourism in Ireland and Scotland. *Tourism Geographies*, 14(4), 535–554. <https://doi.org/10.1080/14616688.2012.647321>
- Frank Salt. (2020). *Buying a property in Valletta*. Frank Salt Real Estate. Retrieved June 9, 2020, from <https://franksalt.com.mt/buying-a-property/property-in-valletta/>
- Freytag, T., & Bauder, M. (2018). Bottom-up touristification and urban transformations in Paris. *Tourism Geographies*, 20(3), 443-460. <https://doi.org/10.1080/14616688.2018.1454504>
- Frías, D.M., Rodríguez, M.A., & Castañeda, J.A. (2008). Internet vs. travel agencies on pre-visit destination image formation: An information processing view. *Tourism Management*, 29(1), 163-179. <https://doi.org/10.1016/j.tourman.2007.02.020>
- Gauci, L. (2019). *A gentrified city?: a factual study of the gentrification process occurring in Valletta and the resulting effects on its residents* (Master's dissertation). University of Malta, <https://www.um.edu.mt/library/oar/handle/123456789/71152>
- Gilge, C. (2016). Google street view and the image as experience. *Geohumanities*, 2(2), 469-484. <https://doi.org/10.1080/2373566X.2016.1217741>
- Giorgetta, S. (2017). *Mapping the change: an analytical approach to identify gentrification processes in the Milanese context* [Unpublished Master’s thesis, Politecnico Milano]. POLITesi digital archive. <https://www.politesi.polimi.it/handle/10589/134155>

- González-Pérez, J. M. (2019). The dispute over tourist cities. Tourism gentrification in the historic Centre of Palma (Majorca, Spain). *Tourism Geographies*, 22(1),121-171.  
<https://doi.org/10.1080/14616688.2019.1586986>
- Guillemard, A., & Lapointe, D. (2017). Neoliberalist redevelopment and the touristification of everyday life. *Critical Tourism Studies Proceedings*, 2017(1), 93.  
<http://digitalcommons.library.tru.ca/cts-proceedings/vol2017/iss1/93>
- Harvey, D. (2007). *A brief history of neoliberalism*. Oxford University Press.
- He, S. (2019). Three waves of state-led gentrification in China. *Tijdschrift voor Economische en Sociale Geografie*, 110(1), 26-34. <https://doi.org/10.1111/tesg.12334>
- Holm, A., & Schulz, G. (2018). GentiMap: A model for measuring gentrification and displacement. In I. Helbrecht (Ed.), *Gentrification and resistance* (pp. 251-277). Springer V.
- Hom, L. D. (2020). Symbols of Gentrification? Narrating Displacement in Los Angeles Chinatown. *Urban Affairs Review*. <https://doi.org/10.1177/1078087420954917>
- Hultman, J., & Hall, C. M. (2012). Tourism place-making: Governance of locality in Sweden. *Annals of Tourism Research*, 39(2), 547–570. <https://doi.org/10.1016/j.annals.2011.07.001>
- Ilic, L., Sawada, M., & Zarzelli, A. (2019). Deep mapping gentrification in a large Canadian city using deep learning and Google Street View. *PLoS One*, 14(3), e0212814.  
<https://doi.org/10.1371/journal.pone.0212814>.
- Jansson, A. (2019). The mutual shaping of geomeia and gentrification: The case of alternative tourism apps. *Communication and the Public*, 4(2), 166-181.  
<https://doi.org/10.1177/2057047319850197>
- Jansson, A., & Lagerkvist, A. (2009). The future gaze: City panoramas as politico-emotive geographies. *Journal of Visual Culture*, 8(1), 25–53.  
<https://doi.org/10.1177/1470412908100902>
- Jover, J., & Díaz-Parra, I. (2019). Gentrification, transnational gentrification and touristification in Seville, Spain. *Urban Studies*, 57(15), 3044-3059.  
<https://doi.org/10.1177/1470412908100902>
- Kavaratzis, M. (2004). From city marketing to city branding: Towards a theoretical framework for developing city brands. *Place Branding*, 1(1), 58-73.  
<https://doi.org/10.1057/palgrave.pb.5990005>
- Kavaratzis, M., & Ashworth, G. (2010). Place branding: where do we stand. *Towards effective place brand management* (pp. 1-14). Edward Elgar.
- Kim, H. & Chen, J.S. (2016). Destination image formation process: A holistic model. *Journal of Vacation Marketing*, 22(2), 154-166. <https://doi.org/10.1177/1356766715591870>

- Koning, A. (2015). 'This neighbourhood deserves an espresso bar too': Neoliberalism, racialization, and urban policy. *Antipode*, 47(5), 1203–23.  
<https://doi.org/10.1111/anti.12150>
- Kuehn, K. M., & Daubs, M. S. (2020). Physical digital labour and the commoditisation of cultural sites: Mediatising tourism through social mapping. In M. Månsson, C. Cassinger, L. Eskilsson, & A. Buchmann (Eds.), *The Routledge companion to media and tourism*. Routledge.
- Larkham, P. J. (2018). The importance of observation: urban morphology in the field. In *Teaching urban morphology* (pp. 265-279). Springer.
- Lees, L. (2008). Gentrification and social mixing: Towards an inclusive urban renaissance? *Urban Studies*, 45(12), 2449–2470. <https://doi.org/doi:10.1177/0042098008097099>
- Lees, L., Shin, H. B., & López-Morales, E. (2016). *Planetary gentrification*. John Wiley & Sons.
- Lew, A. A. (2017). Tourism planning and place making: Place-making or placemaking? *Tourism Geographies*, 19(3), 448–466. <https://doi.org/10.1080017.1282007/14616688.2>
- Li, X., Jia, T., Lusk, A., & Larkham, P. (2020). Rethinking place-making: aligning placeness factors with perceived urban design qualities (PUDQs) to improve the built environment in historical districts. *Urban Design International*, 25(4), 319-338.  
<https://doi.org/10.1057/s41289-020-00137-3>
- Loukissas, Y.A. (2019). *All data are local: Thinking critically in a data-driven society*. MIT Press.
- Main, G., Schembri, J.A, Speake, J., Gauci, R., & Chester, D.K. (2021). The city-island-state, wounding cascade and multi-level vulnerability explored through the lens of Malta. *Area*, 53(2), 272-282. <https://doi.org/10.1111/area.12709>
- Malta Government. (2016). *A strategy for Valletta*. Planning authority and office of the principal permanent secretary, Malta Government, Valletta. Retrieved from [http://www.independent.com.mt/filebank/Valletta\\_Strategy\\_June\\_2016.pdf](http://www.independent.com.mt/filebank/Valletta_Strategy_June_2016.pdf)
- Malta Tourism Authority [MTA]. (2019, February 25). *Tourism in the Maltese Islands*. [Paper presentation]. University of Malta, Malta.
- Marcuse, P. (1985). Gentrification, abandonment, and displacement: Connections, causes, and policy responses in New York City. *Journal of Urban and Contemporary Law*, 28, 195–240.  
[https://openscholarship.wustl.edu/cgi/viewcontent.cgi?article=1396&context=law\\_urbanlaw](https://openscholarship.wustl.edu/cgi/viewcontent.cgi?article=1396&context=law_urbanlaw)
- Markwick, M. (2018a). Valletta ECoC 2018 and cultural tourism development. *Journal of Tourism and Cultural Change*, 16(3), 223-286.  
<https://doi.org/10.1080/14766825.2017.1293674>
- Markwick, M. (2018b). Creative clusters in the regeneration of Valletta and the cultural

- politics of Strait Street. *Urban Research & Practice*, 11(2), 87-110.  
<https://doi.org/10.1080/17535069.2017.1296180>
- Martínez-Hernández, C., Yubero, C., Ferreiro-Calzada, E., & Mendoza-de Miguel, S. (2021). Didactic use of GIS and Street View for Tourism Degree students: understanding commercial gentrification in large urban destinations. *Investigaciones Geográficas*.  
<https://doi.org/10.14198/INGEO2020.MYFM>
- Monteiro, G. H. D. M. (2020). *The transitional functions of mapping: psychoanalytic perspectives on a research with maps* [Doctoral dissertation, UCL (University College London)]. UCL Discovery. Retrieved from <https://discovery.ucl.ac.uk/id/eprint/10093842/>
- Munar, A.M. & Jacobsen, J.K.S. (2013). Trust and involvement in tourism social media and web-based travel information sources. *Scandinavian Journal of Hospitality and Tourism*, 13(1), 1-19. <https://doi.org/10.1080/15022250.2013.764511>
- National Statistics Office. (2012). *Census of population and housing*. National Statistics Office, Malta.
- National Statistics Office. (2018). *Valletta 2018 Investment Survey – Summary*. National Statistics Office, Malta.  
<https://www.gov.mt/en/Government/DOI/Press%20Releases/PublishingImages/Pages/2019/March/28/pr190641/PR190641a.pdf>
- National Statistics Office. (2021). Selected Indicators of Population. National Statistics Office, Malta.
- Pavlovskaya, M. (2016). Digital place-making: insights from critical cartography and GIS. In C. Travis, & A. von Lünen (Eds.), *The digital arts and humanities* (pp. 153-167). Springer.
- Philips, M. (2018). Gentrification and landscape change. In L. Lees L, & M. Philips (Eds.), *Handbook of gentrification studies* (pp. 81–100). Edward Elgar Publishing.
- Pierce, J., & Hankins, K. B. (2019). The city as “dissonant” fetish: Urban (re) production, gentrification, and the conceptual limits of commodity fetishism. *Annals of the American Association of Geographers*, 109(5), 1529-1540.  
<https://doi.org/10.1080/24694452.2018.1545562>
- Portella, A. (2016). *Visual pollution: Advertising, signage and environmental quality*. Routledge.
- Preis, B., Janakiraman, A., Bob, A., & Steil, J. (2021). Mapping gentrification and displacement pressure: An exploration of four distinct methodologies. *Urban Studies*, 58(2), 405-424. <https://doi.org/10.1177/0042098020903011>
- Reljic, T. (2017, November 13). Cities of Justice: Reclaiming Valletta from the market forces of gentrification. *Malta Today*. Retrieved from [https://www.maltatoday.com.mt/arts/valletta\\_2018/82118/cities\\_of\\_justice\\_Valletta](https://www.maltatoday.com.mt/arts/valletta_2018/82118/cities_of_justice_Valletta)
- Rendell, J. (2017). *The architecture of psychoanalysis: Spaces of transition*. I.B Tauris & Co.

- Rius Ulldemolins, J. (2014). Culture and authenticity in urban regeneration processes: Place branding in central Barcelona. *Urban Studies*, 51(14), 3026-3045.  
<https://doi.org/10.1177/0042098013515762>
- Sacco, P. L. & Vella, G. (2017). Introduction to Valletta2018 cultural mapping: Debating space and place. *City, Culture and Society*, 11(1-3). <https://doi.org/10.1016/j.ccs.2017.09.003>
- Satariano, B. (2021). Recreating a therapeutic blue urban space through the architectural restoration of the Triton Fountain in Valletta, Malta. *Cities & Health*, 1-12.  
<https://doi.org/10.1080/23748834.2020.1863105>
- Scholtes, E. (2019). *Photocartographica: Traversing photographic and cartographic mediation* [Master's thesis, University of Leiden]. University of Leiden Open Access. Retrieved from  
[https://openaccess.leidenuniv.nl/bitstream/handle/1887/68834/ResMA\\_Thesis\\_EScholtes.pdf?sequence=1](https://openaccess.leidenuniv.nl/bitstream/handle/1887/68834/ResMA_Thesis_EScholtes.pdf?sequence=1)
- Sequera, J., & Nofre, J. (2018). Shaken, not stirred: New debates on touristification and the limits of gentrification. *City*, 22(5-6), 843-855. <https://doi.org/10.1080/13604813.2018.1548819>
- Sequera, J., & Nofre, J. (2020). Touristification, transnational gentrification and urban change in Lisbon: The neighbourhood of Alfama. *Urban Studies*, 57(15), 3169-3189.  
<https://doi.org/10.1177/0042098019883734>
- Shirvani Dastgerdi, A., & De Luca, G. (2019). Strengthening the city's reputation in the age of cities: An insight in the city branding theory. *City, Territory and Architecture*, 6(2), 1-7.  
<https://doi.org/10.1186/s40410-019-0101-4>
- Sklair, L. (2017). *The icon project: Architecture, cities, and capitalist globalization*. Oxford University Press.
- Smith, N. (1998). Gentrification. In van Vlier, W. (Ed.), *The encyclopedia of housing* (pp. 198-199). Sage.
- Speake, J. (2017a). Fieldwork: Using visual methods as a tool for field data collection. In S. Watt, & Wakefield, C. (Eds), *Teaching visual methods in the social sciences* (pp.143-161) Routledge.
- Speake, J. (2017b). Urban development and visual culture: Commodifying the gaze in the regeneration of Tigné Point, Malta. *Urban Studies*, 54(13), 2919-2934.  
<https://doi.org/10.1177/0042098016663610>
- Speake, J., & Kennedy, V. (2019a). 'Buying'into the waterfront dream? Trajectories of luxury property led developments in Malta. *Tourism Management*, 71, 246-258.  
<https://doi.org/10.1016/j.tourman.2018.10.014>

- Speake, J., & Kennedy, V. (2019b). Changing aesthetics and the affluent elite in urban tourism place making. *Tourism Geographies*, 1-22. <https://doi.org/10.1080/14616688.2019.1674368>
- Summers, B. (2020). Race and the spatial aesthetics of gentrification. Call for papers, American Association of Geographers Annual meeting April 7-11, 2021. American Association of Geographers, November 5, 2020.
- Theuma, N. (2004). Tourism culture and cultural tourism in Malta: The revival of Valletta. In B. Bramwell (Ed.), *Coastal mass tourism: Diversification and sustainable development in Southern Europe* (pp. 292-306). Channel View Books.
- Torpiano, A. (2016). *Spaces for people: Lessons for Valletta*. University of Malta. Retrieved from <https://www.um.edu.mt/library/oar/bitstream/handle/123456789/17854/Torpiano%20Spaces%20for%20People%20Lessons%20from%20Valletta.pdf?sequence=1&isAllowed=y>
- UNESCO (1980). United Nations Educational, Scientific and Cultural Organization. <http://whc.unesco.org/en/list/131>
- University of California Berkeley. (2015). *Mapping Displacement and Gentrification in the San Francisco Bay Area*. University of California Berkeley.
- Valletta 2018 Foundation. (2019). *Valletta2018, Annual Report 2018, Theme 4 Evaluation and Monitoring Research Findings*. Valletta 2018 Foundation.
- Venerandi, A., Zanella, M., Romice, O., & Porta, S. (2014). The form of gentrification. *arXiv preprint arXiv:1411.2984*.
- Venerandi, A., Zanella, M., Romice, O., Dibble, J., & Porta, S. (2017). Form and urban change – an urban morphometric study of five gentrified neighbourhoods in London. *Environment and Planning B: Urban Analytics and City Science*, 44(6), 1056-1076. <https://doi.org/10.1177/0265813516658031>
- Weber, R. (2002). Extracting value from the city: Neoliberalism and urban redevelopment. *Antipode*, 34(3), 519–540. <https://doi:10.1111/1467-8330.00253>
- Weber, R. (2010). Selling city futures: The financialization of urban redevelopment policy. *Economic Geography*, 86(3), 251–274. <https://doi:10.1111/j.1944-8287.2010.01077.x>
- Wyckoff, M. A. (2014). Definition of placemaking: Four different types. *Planning and Zoning News*, 3, 32. [http://www.canr.msu.edu/news/lpis\\_mark\\_wyckoff\\_authors\\_article\\_on\\_four\\_different\\_types\\_of\\_placemaking](http://www.canr.msu.edu/news/lpis_mark_wyckoff_authors_article_on_four_different_types_of_placemaking)
- Xie, P. F., & Gu, K. (2018). *The morphology of tourism: Planning for impact in tourist destinations*. Routledge.
- Yonto, D., & Schuch, C. (2020). Developing and ground-truthing multi-scalar approaches to mapping gentrification. *Papers in Applied Geography*, 6(4), 317-352.

<https://doi.org/10.1080/23754931.2020.1789499>

- Zammit, A. & Aldeiri, T. (2019). Assessing the relationship between community inclusion and space through Valletta 2018 cultural infrastructural projects. In: Valletta 2018 Foundation, *The Impacts of the European Capital of Culture Final Research Report Valletta 2018* (pp. 50–72).
- Zuk, M., Bierbaum, A. H., Chapple, K., Gorska, K., & Loukaitou-Sideris, A. (2018). Gentrification, displacement, and the role of public investment. *Journal of Planning Literature*, 33(1), 31-44. <https://doi.org/10.1177/0885412217716439>
- Zukin, S. (2010). *Naked city: The life and death of authentic urban places*. Oxford University Press.
- Zukin, S., Kasinitz, P., & Chen, X. (2015). *Global cities, local streets: Everyday diversity from New York to Shanghai*. Routledge.