EXPLORING THE SOCIO-SPATIAL INEQUALITIES
OF AIRBNB IN SOFIA, BULGARIA

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Summary: The objective of this article is to provide an analysis of the spatialities of *Airbnb* in Sofia, Bulgaria. Relying on an analysis of both quantitative and qualitative data, this article firstly explores the diffusion and concentration of *Airbnb* listings in the city's districts. It questions whether the platform's self-proclaimed contribution to a more diversified offering of tourism accommodation indeed applies to the context of Sofia. It then identifies which listings are most popular among *Airbnb* guests, and examines who reaps the benefits and profits from this "sharing" economy and who does not. In doing so, this article aims to provide a more nuanced understanding of the power relations in the production and consumption of *Airbnb* experiences. Whilst discussing the socio-spatial impacts of *Airbnb* in Sofia, this article takes into account some of the broader urban transformations that have taken place in the city since the end of the socialist regime in 1989. The findings suggest that the large majority of *Airbnb* listings tend to concentrate in those districts that are marked by commercialization and gentrification and are home to a privileged higher-income population. These areas generally also already benefit from a high concentration of official tourism accommodation and tourist attractions. As such, the article concludes that, like in other European cities, *Airbnb* benefits a selective number of hosts and potentially further exacerbates an already problematic private rental market.

Zusammenfassung: Dieser Artikel analysiert die Verbreitung von *Airbnb* in Sofia, Bulgarien. Basierend auf einer Analyse sowohl quantitativer als auch qualitativer Daten, wird zunächst die Verteilung und Konzentration von *Airbnb*-Unterkünften in verschiedenen Stadtteilen untersucht. Es wird der Frage nachgegangen, ob die Plattform dem selbst gesetzten Anspruch, einer Steigerung der Vielfalt touristischer Unterkünfte, im Falle der Stadt Sofia tatsächlich gerecht wird. Anschließend wird analysiert, welche Angebote bei den *Airbnb*-Gästen am beliebtesten sind und untersucht, wer Nutzen und Gewinn aus dieser ‚Sharing Economy' zieht und wer nicht. Dabei zielt dieser Artikel auf ein differenzierteres Verständnis der Machtverhältnisse zwischen Angebot und Nutzung von *Airbnb*. Bei der Erörterung der sozial-räumlichen Auswirkungen von *Airbnb* in Sofia werden einige der umfassenden Transformationen der Stadt berücksichtigt, die seit dem Ende des sozialistischen Regimes 1989 stattgefunden haben. Die Ergebnisse zeigen, dass sich die große Mehrheit der *Airbnb*-Angebote tendenziell auf Stadtteile konzentriert, die von Kommerzialisierung und Gentrifizierung geprägt sind und von einer privilegierten Bevölkerung mit höherem Einkommen bewohnt werden. In der Regel profitieren diese Gebiete bereits von einer hohen Konzentration an offiziellen touristischen Unterkünften und touristischen Attraktionen. Aus diesem Grund kommt der Artikel zu dem Schluss, dass *Airbnb* in Sofia, wie in anderen europäischen Städten auch, einer selektiven Anzahl von Gastgebern zugute kommt und dazu beiträgt, den ohnehin schon problematischen privaten Mietmarkt weiter zu verschärfen.

Keywords: urban geography, tourism, gentrification, short-term rental, *Airbnb*, Sofia

1 Introduction

In the last few years, a growing body of literature has analysed the effects of short-term rental platforms on specific urban contexts (for example, Alizadeh et al. 2018; Arias Sans and Quaglieri Domínguez 2016; Cócola-Gant 2016; Ferreri and Sanyal 2018; Freytag and Bauder 2018; Gurran and Phibbs 2017; Guttentag 2015; Horn and Merante 2017; Ioannides et al. 2018; Lee 2016; Mermet 2017; Opillard 2016; Wachsmuth and Weisler 2018). Among these studies, the *Airbnb* platform is the most frequently discussed case. Through

its networking technologies, *Airbnb* connects people who seek to rent or rent out residential housing for a short period of time, usually for travel and tourism purposes. *Airbnb*'s operational sophistication and its relatively unregulated and unrestricted status have arguably made it one of the most popular 'sharing economy' platforms in the world. The platform has facilitated over 400 million guest arrivals since its inception in 2008 and now lists over 5 million properties around the globe (Airbnb 2018a). It is currently valued $30 billion, making it one of the most valuable start-ups in the United States, where the platform was first conceived of (Hook 2018).

The objective of this article is to explore the spatialities of *Airbnb* in Bulgaria's capital, Sofia. It aims to provide empirical evidence of *Airbnb* listings in Sofia's districts, whilst considering some of the broader processes of urban transformation that have taken place in the city in the last decades. Although Sofia receives a moderate number of tourists compared to other European cities that have been studied in relation to the '*Airbnb*-effect' (ADAMIAK 2018), it has allegedly been witnessing an 'unprecedented tourism boom' in recent years (SIA 2018; STA 2016; 2017; UNWTO 2016). The local government and the Ministry of Tourism have generally applauded this boom, as it further fits in their broader plans to attract foreign companies, entrepreneurs and startups to invest in the city (SIA 2018). However, there is also a burgeoning sense that tourism development needs to unfold 'sustainably' in the country, and that platform economies like *Airbnb* have a role to play in this (European Council 2018). During an Informal Meeting between the European Ministers of Tourism held in Sofia in February 2018, a European directive was discussed in order to regulate the flourishing short-term rental platforms, including *Airbnb* (ibid.). Estimates of *Airbnb* listings in Bulgaria remain largely unclear, while the majority of listings on these platforms are not registered with the Ministry of Tourism as official tourism accommodations (CAPITAL 2017; DIMITROV 2018). This effectively allows accommodation providers on the platform to evade tourist taxes on overnight stays and dismiss the regulations that other actors in the industry have to comply with (ibid.).

This article argues, however, that the rise of *Airbnb* in Sofia needs to be considered beyond its effects on the hospitality industry and its non-compliance with regulations. It wishes in fact to reflect on some of the broader spatial processes of transformation that have occurred in the city since the end of the socialist regime in 1989 and investigates how platforms like *Airbnb* are imbricated in or exacerbate such processes. In doing so, this study relies on an analysis of listing data that were extracted from the platform in 2015 and in 2018. First, I take stock of the diffusion and concentration of *Airbnb* listings in Sofia's neighbourhoods against the backdrop of broader urban transformations in the city's districts. Here I also examine how *Airbnb* contributes to a supposedly more 'diversified' offering of tourism accommodation vis-à-vis officially registered tourism accommodation in these same neighbourhoods. Then, I briefly discuss who potentially reaps the benefits and profits from the *Airbnb* economy in Sofia

and who does not. Whilst mapping out the listings and the hosts' profiles, I simultaneously reflect on some of *Airbnb*'s claims about its alleged positive economic impacts on 'communities' worldwide (see AIRBNB 2018b; but also ROELOFSEN and MINCA 2018). In doing so, this article intends to provide a more nuanced understanding of the power relations in the production and consumption of '*Airbnb* experiences'. In order to measure these impacts of *Airbnb*, I take into consideration the locations of the hosts' listings, analyse the number of times these listings have been reviewed by guests, and finally carry out a qualitative analysis of the hosts' biographies. This article forms the concluding part of a triptych in which I discuss how three different spatial scales – that of the body, the home, and the city – interrelate and overlap in the *Airbnb* economy in order to unveil the spatial, political and ethical implications of the platform (ROELOFSEN 2018; ROELOFSEN and MINCA 2018; see also MOLZ 2018). Drawing on the work of scholars in urban- and tourism studies, and especially inspired by approaches taken in the work of ARIAS SANS and QUAGLIERI DOMÍNGUEZ (2016) and CÓCOLA GANT (2016), I rely on a mixed method research approach. By combining a content analysis of qualitative user-generated data with a statistical analysis of quantitative closed-ended data, I wish to analyse, interpret and connect different aspects of the platform's social-spatial impacts in their complexity.

2 Tourism, tourism controversies and *Airbnb*

Writing in 1975 about the rise of the 'Golden Horde' –a new 'tribe' of Mass Tourists– TURNER and ASH cynically argued that international tourism might just as well be understood as "a device for the systematic destruction of everything that is beautiful in the world" (1975, 15). Although TURNER and ASH's highly influential work was flawed for various reasons (see BRITTON 1977), it was one of the earlier attempts to chart through a genealogical approach the adverse impacts of tourism on social, environmental and economic livelihoods. At around the same time, the term 'sustainable development' was first coined bearing the promise of supposedly 'mitigating' tourism's negative impacts (see HANNAM and KNOX 2010, 129; also MOWFORTH and MUNT 2003). Among other 'tools' of sustainable tourism development, scholars argued for a 'carrying capacity' of places, referring to "the number of people that a site can cope with before it deteriorates beyond an acceptable regeneration rate" (BEETON and BENFIELD 2002, 497; see also, BEETON

1998). But despite these efforts to chart the 'limits of tourism growth' and to argue for more responsible forms of tourism, the investment in tourism development around the globe has continued unceasingly in the past decades and its 'successes' remain applauded by many local governments, intergovernmental organizations and business elites. 'Boosting' tourism and sustaining 'growth' are the discourses that still permeate the global tourism industry reports today (see UNWTO 2017).

Tourism, as a social force, thus continues to pervade people's livelihoods; not just in terms of its sheer scale produced by steep increases in incoming tourist numbers (UNWTO 2017), but also in terms of its impact on everyday practices, social relations and emotions that intersect in what people consider their 'home' (Roelofsen 2018). In today's hyper-connected world, Colomb and Novy (2016, 23) argue, there remain very few places "whose cultures, economies, social relations and spatial dynamics are not impacted by tourism". What is popularly termed 'overtourism', signals an epitome of such places where various tourism forces have penetrated the everyday lives of local residents to such an extent that their "lifestyles, access to amenities and general well-being" are negatively affected (Milano et al. 2018). Such 'touristification' of places around the world has arguably led to an increased politicization of tourism 'from below', which has manifested itself in a variety of ways (Colomb and Novy 2016, 20). From residents protesting in the streets to local government campaigns that underpin elections; these initiatives take issue with tourism growth and/or with the impacts of tourism on the local sociospatial fabric, sometimes brought about by very specific forms of tourism (Arias Sans and Quaglieri Domínguez 2016; Cócola-Gant 2016; Colomb and Novy 2016; Füller and Michel 2014; Nofre et al. 2018; Opillard 2016). These protests call for a regulation of the tourism economy and changes in urban development and planning models, effectively putting the rights of residents above the perils of capitalism (Colomb and Novy 2016). It is no coincidence that these uprisings have been particularly prevalent in highly frequented 'tourist cities' where the 'quality' of the city itself has long been a commodity, consisting of both material and non-material, symbolic dimensions (Fainstein and Gladstone 1999). Due to the steep increase in tourism arrivals over the years, these places have seen an increased pressure on facilities that are tightly interwoven with other urban (infra)structures and are used by both tourists and residents (Fainstein and Judd 1999).

In the last decade, tourism activities that have driven transformations in urban space have often been analysed through the concept of *tourism gentrification* (Arias Sans 2018; Cócola-Gant 2018; Gotham 2018; Gravari-Barbas and Guinand 2017). Here, tourism is seen as "as a set of practices that has causal impacts on urban form, sociospatial patterns, and processes of urban development" (Gotham 2018, 8). Whereas in earlier years the term elicited the commercial aspects of gentrification "including the replacement of residential land-uses with commercial (touristic) land-uses and displacement of mom-and-pop businesses by entertainment corporations and tourist attractions" (Gotham 2018, 1), in recent years the term has also been employed to signal the "larger economic and political processes, including tourism development, the deregulation and reregulation of urban real estate markets, the actions of transnational corporations, and shifting patterns of global finance" (ibid.). Tourism, indeed, has for decades been driven by global actors (such as hotel chains, rental companies and tour operators), whose operations have drawn *and* impacted on the local socio-spatial fabric. However, it must be noted that *local* actors, including residents, and tourists also contribute to tourism gentrification (Gravari-Barbas and Guinand 2017, 3; Stors and Kagermeier 2017) and structure their environment so as to take advantage of the tourism economy (Herzfeld 2017). Moreover, gentrification processes are not confined to those areas initially conceived for tourism (Cócola-Gant 2018, 281). As already gentrified areas usually provide a 'middle class sense of place' with specific consumption facilities, these areas usually also attract tourists, suggesting that processes of tourism and gentrification enforce one another (ibid., 282). Neighbourhoods that are not initially considered or conceived of as major tourist destinations, now provide for what has been termed 'new urban tourism': they appeal to tourists for the same qualities that make these neighborhoods attractive as places to live, work, and consume (Novy 2010, 31). This (relatively) new form of tourism centres on the experience of 'everyday' or 'ordinary' city life, relying as such on "the amenities, the retail- and entertainment infrastructure that city residents also prefer" (Füller and Michel 2014, 1314)

Marketing campaigns on the part of short-term rental platforms like *Airbnb* indeed promise tourists the possibility of booking accommodation 'off the beaten track', in neighbourhoods that supposedly provide a more 'authentic and local' experience. As such these platforms arguably tap into people's growing discontent with the exploitative nature of com-

mercially mediated travel practices or mass tourism's production of experiences that are perceived to be devoid of true meaning (MacCannell 2013). Already in the first years of *Airbnb*'s operations, hotel lobbies and other actors in the hospitality industry started to accuse the platform of avoiding zoning laws, evading occupancy taxes, and dismissing public health regulations, all of which are compulsory conditions for hotels and other traditional forms of tourism accommodation to operate (Lee 2016, 233). Work in the fields of (tourism) management and business studies has clearly demonstrated the economic impact of the emerging short-term rental platforms on traditional businesses and labour (see e.g. Fang et al. 2016; Oskam and Boswijk 2016; Sigala 2017; Zervas 2017). Such studies have confirmed the platform's ability to disrupt and transform existing tourism markets and their legal and regulatory frameworks (Guttentag 2015), and contribute to the further deregulation of the marketplace in line with broader existing neoliberal regimes (Martin 2016).

Yet other studies have tended to focus on the effects of *Airbnb* on local housing markets and the related processes of displacement. The platform in fact plays an important role in the reallocation of housing stock from long-term to short-term markets and the related rise of housing- and rental prices (e.g. Barron et al. 2017; Horn and Merante 2017; Lee 2016; Wachsmuth and Weisler 2018). This process, in effect, has led to various forms of direct and indirect displacement of residents from certain neighbourhoods, often as a result of rent increase by tourism investors and landlords (Cócola-Gant 2016). Among other important findings, these studies exemplify the role of *Airbnb* in disrupting local housing markets and accelerating gentrification in specific neighbourhoods. Various studies have provided compelling empirical evidence of the '*Airbnb*-effect' in popular European tourist destinations such as Barcelona, London, Madrid, Paris, Reykjavík, Rome, Venice and Vienna (see for example Arias Sans and Quaglieri Domínguez 2016; Celata 2017; Cócola-Gant 2016; Cócola-Gant and Pardo, 2017; Ferreri and Sanyal 2018; Freytag and Bauder 2018; Gil and Sequera 2018; Gutiérrez et al. 2017; Mermet 2018; Nofre et al. 2018) but also reveal how the platform affects mid-sized cities in Europe with highly diversified economies that are not necessarily 'over-touristified' (see also Ioannides et al. 2018). Whilst local regulatory responses to *Airbnb* have varied depending on the amounts of listings in places as well as their perceived negative externalities (Nieuwland and van Melik 2018), the platform continues to contribute to

social displacement – also driven by the daily disruptions caused by increased presence of tourists in certain areas (Cócola-Gant 2016; Gurran and Phibbs 2017; Nofre et al. 2018; Zanini 2017).

3   The housing market and urban transformations in Sofia

Sofia is the heart of Bulgaria's economic, political and cultural life and the administrative centre of Sofia Province. Demographically it is the most densely populated city in the country, with 1.3 million inhabitants, corresponding to 17.5% of the national population (2011 census data from NSI 2012). During the socialist era, the state took on an important role in reducing housing inequality by means of specific planned urban policies (Vesselinov 2004). Dwellings were allocated to residents through "a socialist administrative method of distribution in accordance with housing need regardless of income" (ibid., 2610). But the state also produced what has been termed as an urban 'regime of controlled uniformity' through the application of a relatively constant and uniform system of property rights and ensured regulated access to housing loans through the State Savings Bank (ibid., 2610–2611). After the collapse of the socialist regime in 1989, Bulgaria experienced a drastic reduction of the role of the state in all branches of the economy. This change was particularly felt in the housing construction industry and led to a substantial restructuring of the residential market and the patterns of habitation in Sofia (Hirt and Stanilov 2007, 218). During the early 1990's, Bulgaria initiated a massive privatization of the housing sector, both in terms of production and ownership. By 2001, 96% of all dwelling units in urban areas were in private hands (ibid.). The transition to a market economy also brought about new sources of housing inequality, such as a "lack of state subsidies for housing [...] the transfer of responsibility for social housing from the state to the municipalities and changes in mortgage lending" (Vesselinov 2004, 2613).

In June 2017 the World Bank published a report on Bulgaria's Housing Sector Assessment that raised a number of serious concerns about Sofia's housing sector (World Bank 2017). The report states that Bulgaria has extremely high vacancy rates and that affordability has become an increasing problem across the country. Household mobility in Bulgaria is one of the lowest among the countries that have transitioned to a market-based economy since the fall of the Iron Curtain (ibid., 1). Immediately after the 2007-8 global financial crisis, house prices have dropped by 30-

50 %, but have now again reached pre-crisis levels, with average market prices being the highest in Sofia City (ibid., 107). At the same time, poverty rates have risen. More than a third of young adults continue to live with their parents, as they are unable to afford their own housing. Another major area of concern is vacancy and overcrowding. Over 40 % of households live in overcrowded conditions whereas the housing vacancy rate in Sofia is 24 %. This high vacancy rate might be seen as an opportunity to address the absence of a robust rental market: today less than 5 % of the country's housing stock is leased out in the rental market (World Bank 2017, 124). However, current regulations in the country tend to erode the rights of both tenants and landlords, proving an important cause for housing market failures (ibid., 16; see also LOWE 2000). At the same time, landlords are unwilling to rent their properties out due to the current eviction laws, which, according to the report, tends to favor the tenants. Other aspects that keep landlords from renting out their property is "the inability to enforce formal lease agreements in the court of law" as well as "a general hesitation to rent out the property based on the legacy of poor maintenance" (World Bank 2017, 16). Moreover, a "flat 10 % income tax applies to rental income, which, although minimal, could be a disincentive to report rental income" (ibid.). For tenants, on the other hand, the problem is the high cost of market-based rentals. Some "42 % of single person households, and 31 % of tenants in market priced rentals face housing cost over-burdens" (ibid., 2). Only the highest income decile (> BGN 1969.00/ EUR 1006.00 monthly) of the population can afford high priced rental properties, whereas less expensive rental properties are only affordable to the seventh income decile and above (i.e. > BGN 1070.00/ EUR 547.00 monthly) (ibid.). Up until today, there is almost no reliable data concerning the rental market in Sofia, its size and dynamics (see also LOWE 2003) making it difficult to say something precise about the actual impact of *Airbnb* in this context.

Sofia City is subdivided in 24 districts (see Fig. 1), which can be broadly clustered into different 'rings' (HIRT and STANILOV 2007). Each of these clusters have gone through their own processes of residential restructuring some of which will be discussed later in conjunction with an analysis of *Airbnb* data.

The first ring is the 'historic' central core area with residential buildings built in the late 19th and 20th century (HIRT and STANILOV 2007). The central core of Sofia historically hosts the key government, finance, and management functions for the urban region and Bulgaria (STADDON and MOLLOV 2000, 383).

It also features a large proportion of the city's official tourism attractions, for example, the Aleksander Nevski Cathedral, the Ancient Serdica Complex, the Regional History Museum, the Archaeological Museum, the Sofia History Museum, the Women's Market and many more. Since the early 1990's, this ring has gone through a series of spatial transformations, marked by densification, commercialization, and gentrification (HIRT and STANILOV 2007, 223). As a consequence of the 'unfreezing' of the land and of the real estate market after the collapse of the socialist regime, this ring has become an attractive area for foreign investors and exiled Bulgarians to acquire multi-family homes (BRADE et al. 2009, 228). In the past decade, Sofia's centre has witnessed a conversion of residential spaces to office and commercial use, and the replacement of older structures with larger buildings. This conversion has accommodated primarily commercial and office functions, ostensibly leading to the displacement of lower and middle-income residents (HIRT and STANILOV 2007, 223). The city centre has accordingly seen a substantial decline of residents in the decades following the collapse of the socialist regime (STANILOV and HIRT 2014). Moreover, 'commercial gentrification', a process by which new luxury shops and services target the more affluent residents, office employees and visiting tourists, has forced lower rank stores and services to relocate. These lower rank commercial entities provided amenities to lower income residents and the elderly residents of Sofia who, consequently, have been hit hard by the impact of commercial gentrification. This has led to displacement of vulnerable groups from the inner city to the housing estates located at the city outskirts (ibid., 225).

Surrounding the central core are traditional urban neighbourhoods with medium-height residential buildings, which arose during the early and mid-20th century (HIRT and STANILOV 2007). Prestigious low-density neighbourhoods in this ring, such as Lozenets, have also undergone intense processes of re-development. They are also the center of post-socialist gentrification, including high property prices (see HIRT 2012, 101) and the conversion of public green spaces as well as pre-war single-family housing into upscale (usually gated) medium-height residential housing (HIRT 2006). Here, first floors along the main streets have been converted to commercial use.

The third ring is the largest and incorporates the vast majority of socialist housing estates, which were built between the early 1960's and the late 1980's. These estates largely consist of modernist high rises made of prefabricated concrete panel blocks, surrounded by shopping- and medical facilities, schools
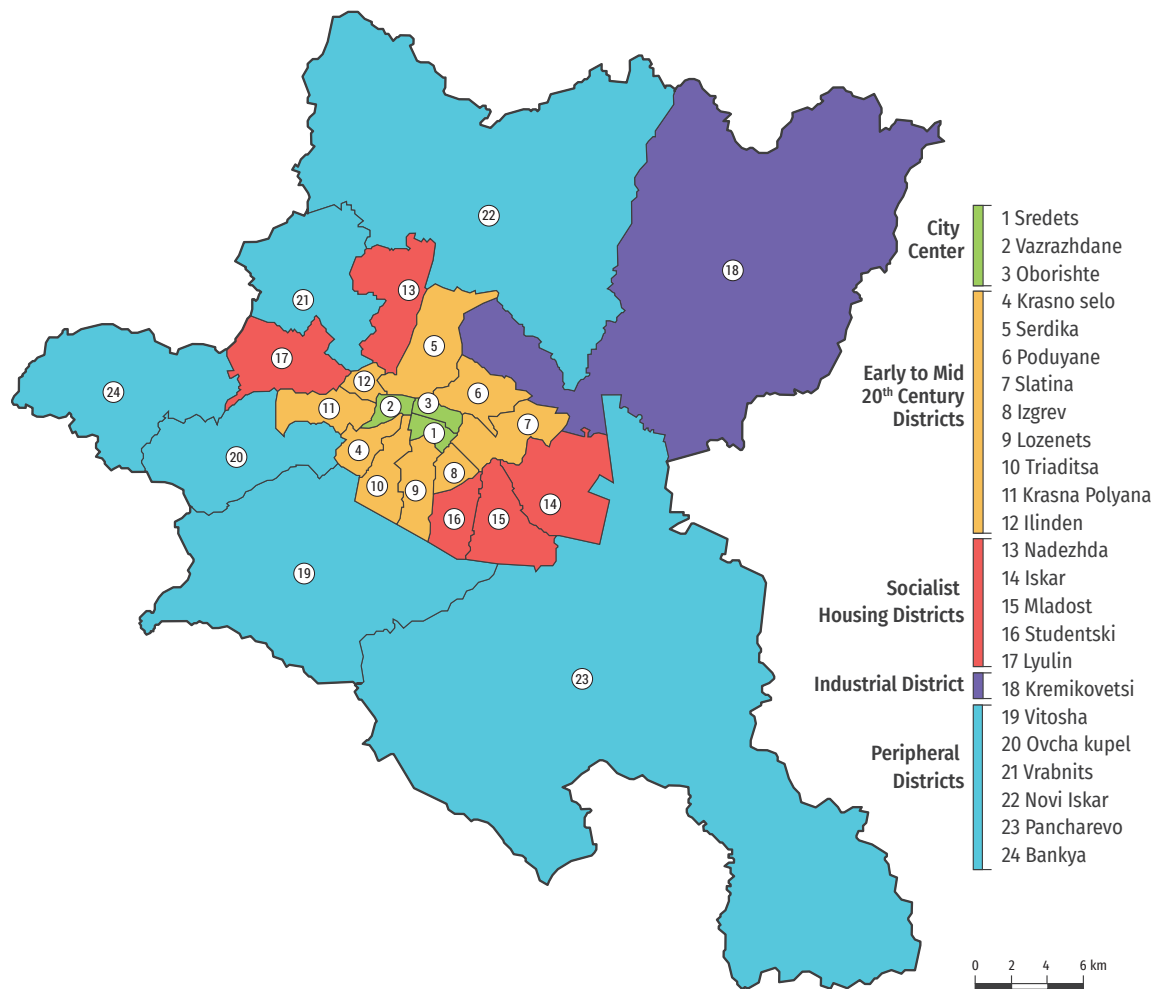
Fig. 1: Map of Sofia City districts. Adapted from HIRT (2012, 116) and reproduced with the permission of the author.

and other services (HIRT and STANILOV 2007; STADDON and MOLLOV 2000). An estimated 60 % of Sofia's residential population lives in such large-scale housing estates (BRADE et al. 2009, 228). The lack of maintenance of socialist-era multifamily buildings represents an area of concern. A reported 75 % of these buildings is older than 30 years and suffer from "leaking roofs, damaged facades with fallen plaster, ill-maintained stairwells and hallways, and leaking water and sewer pipes" (World Bank 2017, 13).

The fourth ring could be conceived of as an evolving low-density residential periphery, which comprises of predominantly single-family homes (HIRT and STANILOV 2007, 215). The Vitosha district largely covers the southern part of this ring, which is characterized by a large number of gated communities, constructed by a powerful group of private stakeholders (BRADE et al. 2009, 228). SMIGIEL (2013, 134) argues that this group was only able to construct

these segregated landscapes "because of a neo-liberal policy setting whose main policy pillars are deregulation, decentralisation, privatisation and commodification". Programmes, projects and strategies of international institutions such as the World Bank and the International Monetary Fund have inspired this urban policy model since the 1990's (ibid.). In the last 20 years, the population in these peripheries has grown exponentially. Vitosha, for example, has witnessed a 60 % increase in population and a 150 % increase in the number of dwellings (STANILOV and HIRT 2014).

4   Methods

As noted above, this paper is the result of a socio-spatial analysis of *Airbnb* listing data that was manually extracted from the platform in May 2015. As such, the below presented analysis is de-

rived from a snapshot of the listings advertised on the platform during a very specific period of time. Section 6 will discuss some of the important limitations that such a snapshot entails in terms of providing an accurate and reliable analysis. By using the platform's openly accessible search tool, a general search was conducted using the 'Sofia, Bulgaria' search terms, without specifying a specific district or number of persons staying, nor specific periods or number of nights of stay. The resulting 483 listings that were produced through the search engine were thereafter manually 'scraped' after which the data was parsed and categorized. The information that was extracted and categorized included: the unique URL of the listed property; the name of the host; the host's profile description (biography); the place of origin of the host (if mentioned); the year the host became a member of the platform; the name of the listing (e.g. 'Super central four-room apartment'); the type of listing (whether the listing concerned an entire place, a private room or a shared room); the number of guests the listing could host; the number of beds present in the listing; the street name (both in Cyrillic and Latin); the district in which the listing was located; the number of listings per host in Sofia; the number of listings per host in total (also outside Sofia); whether more listings were within the same property (e.g. if private rooms were located in the same house); whether it concerned public or private property (e.g. whether the listing was a hostel, hotel, B&B or a non-commercial entity, if mentioned in the description); the overnight rate of a listing per night (in the months July and in November); the cleaning fees hosts levied (if applicable); the service fee charged by *Airbnb* in July and November; the number of guest reviews received per May 2015 (when the data was first extracted); the number of guest reviews received per June 2015 (when the data was double checked in a second round); whether or not the host had received a Superhost status at the time of inventory; and the gender of the host.

During the first round of analysis, each host was given an ID number in order to differentiate between unique hosts and to account for hosts with multiple listings. The hosts' profile descriptions were thematically analysed using qualitative data analysis software MAXQDA. During a third round of analysis in April 2018, all URL's of the 483 listings that were extracted in 2015 were revisited again to verify: 1) if the May 2015 listings were still active; and 2) how many reviews the listings had received since May 2015.

5 An exploration of *Airbnb* in Sofia

In 2015, a total of 483 *Airbnb* listings in Sofia showed up in the search results and were analysed. Almost three quarters of all *Airbnb* listings were located in the so-called historical core, and in the southern peripheral districts of the second ring of Sofia (see Fig. 2). These are the 'culturally desirable districts', which have generally already been subject to processes of commercialization and gentrification since the end of the socialist regime. More specifically, the top 5 highest concentrations of *Airbnb* listings were located within the following districts: Sredets (168 listings); Oborishte (80 listings); Triaditsa (42 listings); Lozenets (38 listings) and Vitosha (22 listings). These together make up for 73 % of all *Airbnb* listings in the city. Sredets is the most densely *Airbnb*-listed district and accounts for 35 % of all *Airbnb* listings in Sofia. In Sredets 70 % of all listings were entire places. In Oborishte, Triaditsa, and Lozenets, over 78 % of all listings concerned entire places rather than private- or shared rooms within a property. Out of all listings, approximately 73 % concerned entire places, 24 % were private rooms and the remaining 3 % were shared rooms.

Since the initial data collection in 2015, *Airbnb* listings have increased fivefold in Sofia (SIA 2018). *Sofia Investment Agency*, which is officially part of Sofia Municipality and promotes and assists foreign investment in the city, positively showcases *Airbnb*'s popularity in its most recent report on Tourism and Transport in Sofia (ibid.). Relying on data obtained from *AirDNA*, the report states that *Airbnb* is becoming an increasingly important player in the tourism market, which is reiterated in the report by Boris Pavlov, founder of the local *Airbnb* Property Manager Firm *Flat Manager* (ibid., 21). Out of a total of 2353 active *Airbnb* listings in Sofia in 2018, roughly 80 % concerned entire places (SIA 2018, 20). Returning to the earlier observations made by the World Bank (2017), the increased presence of *Airbnb* listings in the city, and particularly of entire places rather than shared accommodation, raises questions around what this means for local tenants that currently face an extremely critical rental market. Based on the latest 2011 census data provided by National Statistical Institute (NSI 2012), Sofia had approximately 600,000 dwellings. Although there are no exact figures available on the total dwellings for rent in Sofia, according to the World Bank report (2017) less than 5 % of all dwellings - approximately 30,000 - were available on the rental market. Considering that those 1882 *Airbnb* listings
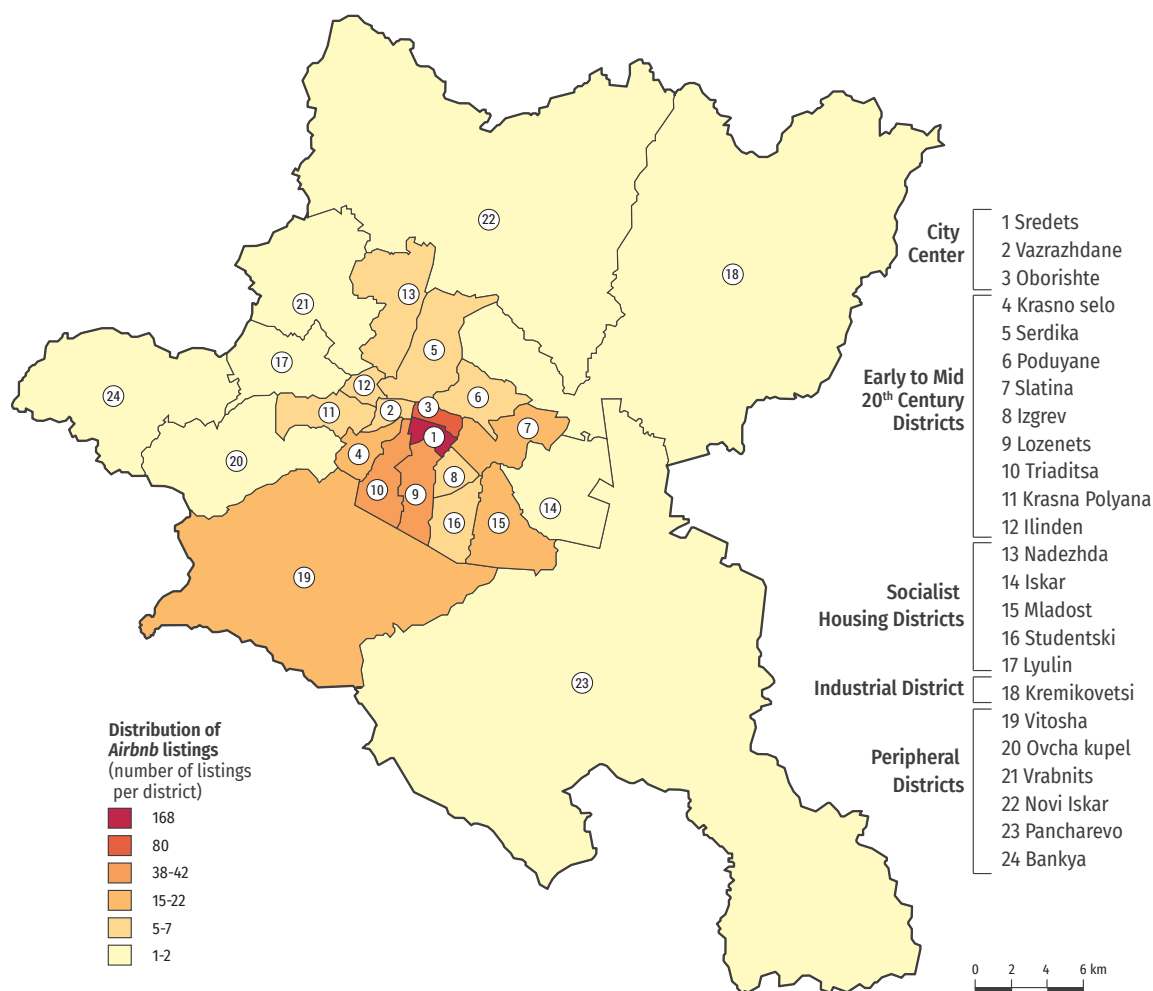
Fig. 2: Distribution of *Airbnb* listings by district in Sofia (Bulgaria) May 2015. Source: the author's own map compiled from *Airbnb* listing data extracted in May 2015.

in Sofia concern entire apartments, one can presume that these make up at least 6 % of the current estimated rental market. As it stands, *Airbnb* provides local property managers and landlords with the opportunity to rent out to tourists rather than to residents, affording them to avoid dealing with the problematic regulations around rental housing. At the same time, local residents who seek long-term rental housing in an already tight housing market, find themselves confronted with the encouragement of private investment in tourism accommodation rather than long-term secure housing.

When comparing the approximately 1,100 *Airbnb* beds listed in Sofia in 2015 to an approximate 18,400 beds within Sofia's official Accommodation Establishments (also termed 'AE's' by STA 2017) a few observations can be made. Just over 55 % of all *Airbnb* beds are located within Sredets and Oborishte. These

districts are part of the city ring and harbour some of the most commonly visited tourist attractions. Whilst Oborishte has a moderate share of AE-beds, Sredets accounts for a share of over 8 % of total AE-beds in Sofia (STA 2016). Another 15 % of all *Airbnb* beds are located within Triaditsa and Lozenets, which are both located in the second ring of Sofia. These two districts make up for over 20 % of the total AE-beds in Sofia, with Lozenets corresponding to a little over 12 % of all beds (ibid.). The Vitosha district, which is located at the southern rims of Sofia and is famous for the Vitosha National Park and Vitosha Mountain, accommodates the largest number of official Accommodation Establishments and the second largest number of AE-beds. While being the fifth most *Airbnb*-listed district, it only accounts for approximately 40 *Airbnb* beds compared to approximately 1800 AE-beds. Although the most densely *Airbnb*-listed districts indeed resem-

ble the most popular AE-districts in Sofia, all official AE's enjoy a slightly more even spread throughout all districts in Sofia. Thus, despite *Airbnb*'s claims that 74 % of *Airbnb* properties are located outside the main hotel districts (Airbnb 2018b) the concentration of listings and beds in Sofia's city centre and second ring show a rather different picture (see Fig. 2 and Fig. 3).

The somewhat less popular peripheral districts and the socialist housing districts Kremikovtsi, Novi Iskar, Nadezhda, Lyulin and Iskar have the lowest concentration of both *Airbnb* listings and AE's. Krasna Polyana and Ilinden are perhaps the only two districts that do not have AE's and do have 5 and respectively 7 *Airbnb* listings each. The densely populated lower- and middle-income districts –roughly clustered within the third ring– are minimally represented in the listing data. Districts such as Mladost, Studentski, Iskar, Lyulin, Nadezhda which can be clustered under the third ring, have the highest population number and are the largest in terms of area, but represent a mere 7 % of all *Airbnb* listings. These districts incorporate the vast majority of socialist housing estates. And although these lower- and middle-income districts could arguably profit from an extra income, they also represent the least reviewed *Airbnb*-listed districts.

5.1 Guest reviews of *Airbnb* listings in Sofia

A significant limitation in estimating *Airbnb*'s potential economic impact in specific districts comes from the fact that the platform does not disclose information on the number of bookings made by their guests. Although reviews do not elicit information on the number of nights that were booked nor the overnight fees that were charged for the stay, they may however provide some approximate esteem of the popularity of certain districts. Consequently, the reviews may disclose some information on who profits from *Airbnb*, and who does not. Out of all 483 listings in Sofia, 206 listings received reviews, whereas 277 listings did not receive any reviews. A total of 2629 reviews were counted in May 2015. Almost 80 % of all reviews could be attributed to listings within three districts: Sredets (1509 reviews, or, 57 %), Oborishte (399 reviews, or, 15 %) and Lozenets (150 reviews, or, 6 %) (see Fig. 4).

Again, these are the districts in which we find the main hotel providers, tourist attractions and are the districts with high property- and rental prices, experiencing densification, commercialization, and gentrification. This shows how tourism and gentrifica-
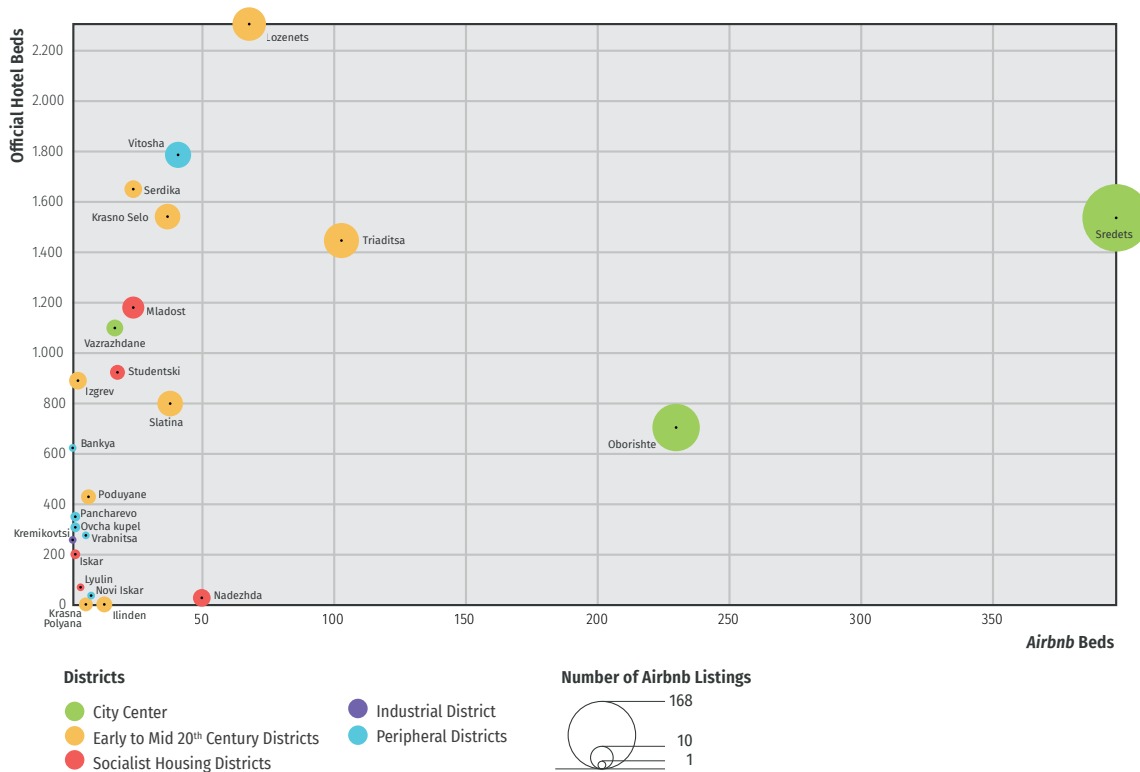

Fig. 3: Official hotel beds versus *Airbnb* beds by district in Sofia (Bulgaria) May 2015. Compiled from *Airbnb* listing data extracted in May 2015 and data from STA 2016.

tion in Sofia are effectively interrelated – those areas that already attract middle-class residents and have undergone gentrification processes are most popular among *Airbnb* guests. However, listings in the following districts, largely characterised by social housing estates, did not show any reviews: Poduyane, Iskar, Ovcha kupel, Bankya, Kremikovtsi, Lyulin, Novi Iskar and Vrabnitsa.

In Sredets, the top 23 listings (out of 87 reviewed listings) received 1016 reviews. These 23 listings thus account for 67 % of all reviews in the district. In Oborishte the top 10 listings (out of 37 reviewed listings) received 272 reviews, which account for 68 % of the total reviews in the district. And in Lozenets, the top 5 listings (out of 19 reviewed listings) received 113 reviews, which account for 75 % of the total reviews in the district. What these top three *Airbnb* districts therefore share is that a little over 25 % of reviewed listings make up for almost 70 % or more of the total reviews. This suggests that the distribution of *Airbnb* revenues is strongly unequal not just between districts but also within districts in Sofia. Moreover, more than 75 % of all reviews account for stays in entire places rather than (shared) bedrooms within people's homes.

Finally, all 2015 *Airbnb* listings in Sofia were revisited again online in April 2018 using the listings' unique URL's. This second round of analysis aimed to verify: 1) if the 2015 listings were still active; and 2) how many reviews these listings had received since 2015. Out of 483 total properties visible on the platform in 2015, approximately 40 % were no longer listed in 2018. Out of the remaining properties still listed, a little less than half still did not receive a single guest review to date. The remaining properties received a total of 5984 extra guest reviews on top of their existing reviews received in 2015. Conforming to the findings from 2015, Sredets, Oborishte and Lozenets remain the top three districts in terms of guest reviews over a period of 3 years (May 2015-April 2018). On average, the remaining 2015 listings in Sredets enjoyed a growth of 233 %; those in Oberishte of 271 %, and those in Lozenets of 267 %.

5.2 *Airbnb* Sofia's 'local' hosts

A total of 318 unique hosts were counted on the platform. The large majority identified themselves as residents from Sofia, but others as Bulgarian nationals living abroad and a few others as foreign residents. Most profiles/biographies were written in English, several were written in German, Spanish or

French, and only three in Cyrillic. The large majority of hosts declared to be fervent travellers themselves, open to other cultures, and were keen to share their 'version' of Sofia with *Airbnb* guests. Most profiles also attested of highly educated people who worked as lawyers, IT- and software specialists, artists, designers, journalists, marketing- and PR specialists. This confirms what other studies have found: that *Airbnb* is a relatively exclusive marketplace for highly educated professionals (e.g. FRENKEN and SCHOR 2017; SCHOR 2017) with privileges such as the political right to mobility and the economic means to travel. At first sight, a total of 27 % *Airbnb* listings of private- and shared rooms in Sofia could be interpreted as rooms that are 'shared' within a private property of a local host. However, a more detailed analysis showed a different picture. Out of these 128 private/shared rooms, 35 rooms (27 %) were advertised by property managers, hostel owners hostels, B&B's and guesthouses.

A total of 250 hosts advertised one listing on the platform and almost half of all *Airbnb* listings in Sofia were advertised by only 68 hosts. Very optimistically assuming that all hosts advertised at least one of the properties in which they usually lived, around one third of Sofia's *Airbnb* listings represented properties that were either second homes or properties that were not owner-occupied. Furthermore, a total of 32 hosts on the platform were representatives or personnel of commercial entities such as hostels, hotels, B&B's, guesthouses and rental agencies. For example, host Daniela (a pseudonym) managed 13 entire *Airbnb* listings in Sofia. Daniela's biography explained: "I manage professionally designed apartments in Sofia's top neighbourhoods catered towards discerning travellers (leisure or business) who want to experience Sofia". Professional hosts like Daniela accounted for 92 *Airbnb* listings, or, 19 % of the total listings in Sofia. These listings received a total of 247 reviews (9 % of the total reviews). It has been argued that some of these commercial entities profit from *Airbnb*'s relatively low booking commissions and the option to rate users in order to encourage appropriate behaviour (EPSTEIN 2014; ITB 2014). Here, *Airbnb* arguably also allows property managers and landlords to ask higher rents from tourists, whilst potentially not declaring income tax, which is mandatory when renting out to resident tenants. Reflecting on the abovementioned results, one can assume that a significant number of hosts on the platform do not represent the celebrated 'local' hosts whom "share the home in which they live", as claimed by *Airbnb* in its own reports (2018b).
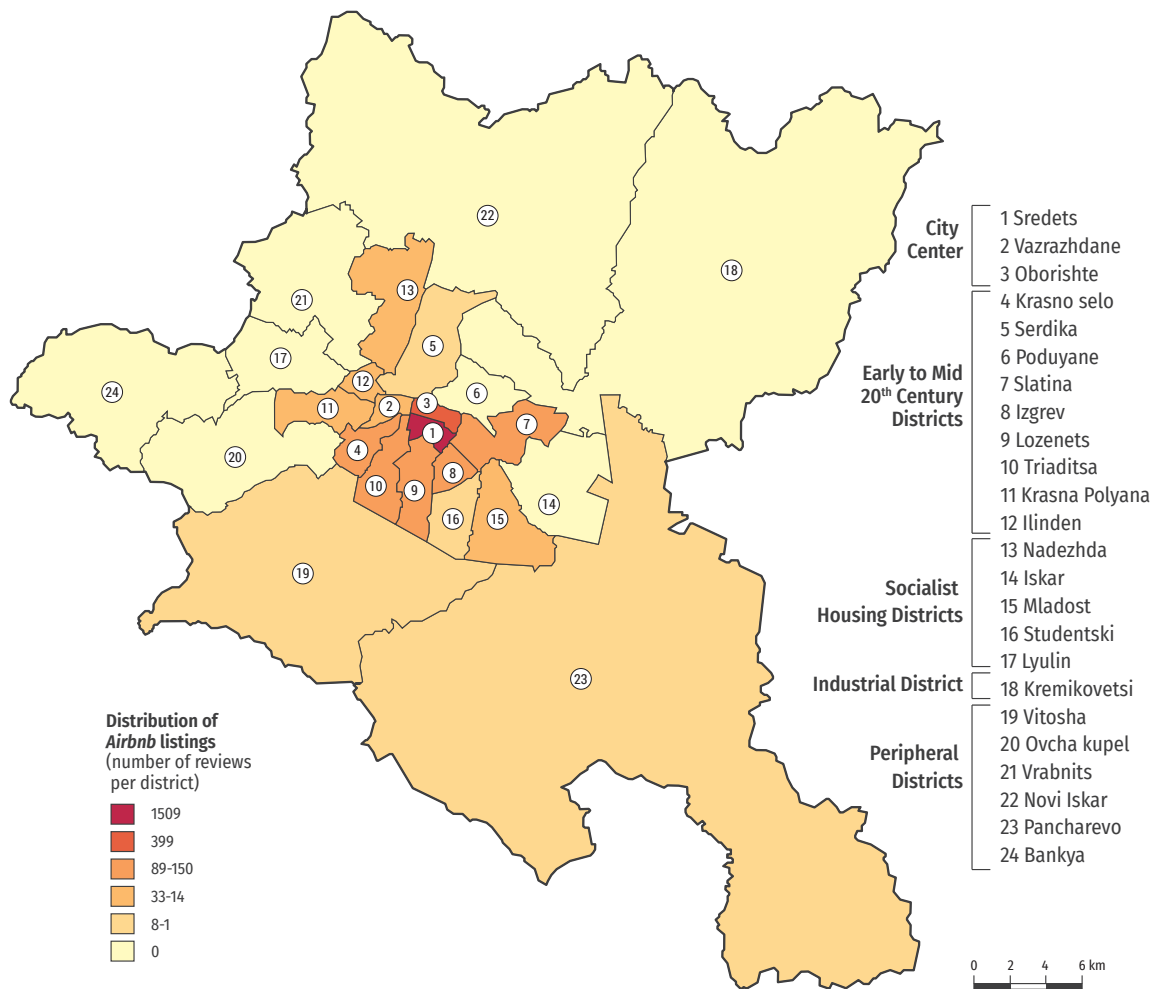
City Center
1 Sredets
2 Vazrazhdane
3 Oborishte

Early to Mid 20th Century Districts
4 Krasno selo
5 Serdika
6 Poduyane
7 Slatina
8 Izgrev
9 Lozenets
10 Triaditsa
11 Krasna Polyana
12 Ilinden

Socialist Housing Districts
13 Nadezhda
14 Iskar
15 Mladost
16 Studentski
17 Lyulin

Industrial District
18 Kremikovetsi

Peripheral Districts
19 Vitosha
20 Ovcha kupel
21 Vrabnits
22 Novi Iskar
23 Pancharevo
24 Bankya

Distribution of Airbnb listings
(number of reviews per district)

1509
399
89-150
33-14
8-1
0

0   2   4   6 km

Fig. 4: Distribution of Airbnb listing reviews received per district in Sofia (Bulgaria) May 2015. Source: the author's own map compiled from Airbnb listing data extracted in May 2015.

6   Limitations

While discussing these findings, however, a number of limitations in this study have to be taken into account. The first and foremost limitation pertains to the inherent fluidity and partiality of the data. Since hosts can adjust, list and unlist their property at their convenience and at any given time, the dataset in this study only captures Airbnb listings within a specific time frame. Airbnb listings – including entire places – can be advertised on the platform for only a very limited period of time, while being inhabited for the remainder of the time. The findings presented above should therefore be read with caution and at no time should they be referred to without mentioning the fluid and partial nature of the data. The second limitation is that the listings on the platform were not accurately georeferenced. Airbnb did not disclose the exact location of the listings and listings can be anywhere between 0-150 meters away from the actual location on the map that is paired up with Airbnb's search engine. Whilst a few Airbnb hosts did disclose the exact street number of their property in their advertisement, the majority of hosts did not. Consequently, the street name of each listing and its location on a map (using the zoom function) was attributed to a specific district in Sofia City as accurately as possible but a margin of 0-150 meters had to be taken into account. The 84 anonymized listings that did not feature street names but instead mentioned 'Sofia City' as a location, were each attributed to a district based on their location on the map that is paired up with Airbnb's search engine.

7 Conclusion

This study aimed to explore the spatialities of *Airbnb* in Sofia, taking into account the broader processes of urban transformation that have developed in the city over the past decades. Despite Sofia attracting a moderate yet rapidly growing number of international tourists compared to other more popular tourist cities in Europe, this study has shown that *Airbnb* had an impact somewhat similar to those experienced in other destinations. However, *Airbnb*'s presence in Sofia also revealed something specific, due to its recent history as a post-socialist city. *Airbnb* listings predominantly concentrate in those districts that have undergone processes of (commercial) gentrification and also harbour the majority of officially registered tourism accommodations and tourism attractions. These are, at the same time, the most affluent areas of Sofia, areas that house the growing middle- and upper-middle classes of Bulgaria (HIRT and STANILOV 2007). Thus, while *Airbnb* declares to offer a 'local' experience to travellers by staying in non-tourist-saturated neighbourhoods, the findings in this study suggest otherwise. Commercialization, gentrification and a privileged higher-income population mark the most popular *Airbnb* neighbourhoods in Sofia. In a similar vein, *Airbnb* mainly benefits those hosts that already profit from a privileged position: both in terms of their residential location in the city, as well as in terms of their socio-economic status. Perhaps equally important is the fact that this study has brought to light the socio-spatial inequalities produced by *Airbnb* in relation to larger economic and political processes that have prevailed in the city after the end of the socialist regime. These include the unregulated privatization of the housing market, and a neo-liberal housing agenda that resulted in "a delegitimation of all kind of public involvement in urban development", a philosophy still guiding Sofia's urban policy today (SMIGIEL 2013, 128). A philosophy that, ironically enough, was promoted in the past by the same World Bank that now expresses its concerns about the current state of Bulgaria's housing market (ibid.).

The municipality's burgeoning desire for tourism growth and its celebration of the tourist 'boom' to incentivize more foreign investment seem to offer the ideal conditions for *Airbnb* business to flourish in Sofia. Although housing security (and affordability) might be pressing concerns for the municipality and Bulgaria more generally, the prioritization of tourism development is not perceived as a process potentially aggravating those same problems. This is somewhat surprising as Bulgaria is certainly not new to the unique set of challenges that the 'sharing economy' brings to urban governance and policy makers. A far more radical stance was taken when car-service platform *Uber* first launched in Bulgaria in 2014 (GAVRILOV 2015). The platform was quickly met with massive opposition from taxi drivers and state institutions, who claimed that "neither the company [*Uber*] nor the drivers comply with the road transport law and other relevant legislation" (MARKOVA 2016). About one year later, Bulgaria's Supreme Court forced the platform to seize its operations. But while *Airbnb* has operated in Bulgaria for much longer than *Uber*, the aforementioned Informal Meeting between the EU Ministers of Tourism on curbing *Airbnb* within the country is a relatively new one (DIMITROV 2018). In order to prevent a further decrease in the city's already critical rental housing stock and the associated spatial transformations, urban planners and policymakers in Sofia may learn from other cities around the world that have regulated the platform (see, for example, NIEUWLAND and VAN MELIK 2018). At the same time, this work on Sofia will hopefully inspire other studies on cities in Eastern Europe with lower numbers of tourist arrivals where *Airbnb* may have similar impact on social change in the city.

Acknowledgements

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