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PALIMPSEST INDUSTRY: INDUSTRIAL HERITAGE AND INTANGIBLE CULTURAL HERITAGE IN THE CREATIVE CITY
A comparative analysis of the Old Truman Brewery in London and Technopolis in Athens

INDUSTRIA PALIMPSESTA: PATRIMONIO INDUSTRIAL Y PATRIMONIO INTANGIBLE CULTURAL EN LA CIUDAD CREATIVA
Un análisis comparativo entre Old Truman Brewery en Londres y Technopolis en Atenas

Sotiria Sarri
Arquitecta MSc UCL

ABSTRACT
In the face of globalisation, maintaining cultural diversity is important for the long term resilience of cultural heritage (UNESCO, 2003). An intrinsic part of the latter is industrial heritage, which, together with Hillier's (2016) notion of creativity as the city's fourth sustainability, can contribute to building inclusive societies and strengthening the economy.

This paper explores those spatial and social cycles of an industry´s (re)use and their integration in urban development, through the study of configurational, morphological and perceptual characteristics. For this reason, two industrial heritage schemes are investigated; the Old Truman Brewery in London, UK and Technopolis in Athens, Greece. The study examines those factors present in the urban environment and the syntactic form of each scheme that affect the density of interactions and people's perceptions of heritage constitution. Along with Space Syntax, on site observations and morphological analysis, mental mapping is also implemented as a tool to bring forth those attributes which constitute living expressions of each site's legacy.
The findings demonstrate that the studied cases variation is linked with their spatial configuration and management, but more importantly with their local to global spatial relations in facilitating "contacts of the right kind" (Hillier, 2016) through diffused social networks.

Key words: Industrial heritage, intangible cultural heritage, creativity, urban morphology, mental maps

RESUMEN
Frente a la globalización, mantener la diversidad cultural es importante para la conservación del patrimonio cultural (UNESCO, 2003). Una parte intrínseca de la diversidad cultural es el patrimonio industrial, que, junto con la noción de creatividad de Hillier (2016) como la cuarta sostenibilidad de la ciudad, contribuye a construir sociedades inclusivas y fortalecer la economía.

Este artículo explora los ciclos espaciales y sociales de la (re)utilización de una industria y su integración en el desarrollo urbano, a través del estudio de características configuracionales, morfológicas y perceptuales. Por esta razón, se investigan dos esquemas de patrimonio industrial; Old Truman Brewery en Londres, Reino Unido y Technopolis en Atenas, Grecia. El estudio examina los factores del entorno urbano y la forma sintáctica en que cada modelo afecta a las interacciones y a las percepciones de la gente sobre la constitución del patrimonio. Junto con la metodología de Space Syntax, las observaciones en el lugar y el análisis morfológico,

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el mapeo mental también se implementa como una herramienta para resaltar aquellos atributos que constituyen expresiones vivas del legado de cada sitio.

Los hallazgos demuestran que la variación de los casos estudiados está vinculada con su configuración y gestión espacial, pero más importante aún con sus relaciones espaciales tanto locales como globales al facilitar "contacts of the right kind" (Hillier, 2016) a través de difusas redes sociales.

Palabras Clave: Patrimonio industrial, patrimonio intangible cultural, creatividad, morfología urbana, mapas mentales

1. Introduction

Palimpsest, stemming from *pálin* (again) and *psēn* (to scrape), refers to “something that has changed over time and shows evidence of that change” (Webster, 2006). In the industrial heritage context, it is used to refer to those spatial and social cycles of an industry’s (re)use; as a layering of multiple activities and cultures that unfold within the same place over time. The elements that survive through time are physical (tangible), such as building shells, redundant machinery, but also non-physical (intangible) ones, such as traditional crafts, knowledge systems and values (UNESCO, 2003).

Industrial heritage is regarded as an intrinsic part of cultural heritage and is defined by TICCIH (2003) as, “the remains of industrial culture, which are of historical, technological, social, architectural or scientific value”. It also plays a crucial role in the planning, policy-making and rehabilitation of the remains of deindustrialised sites (ICOMOS/TICCIH, 2014). However, above all, industrial heritage is an interconnected part of cities and their alterations, as it belongs to the urban environment’s past, present and future, but more importantly to people, as it is directly associated with memories, ways of living, traditions and labour movements (Oevermann and Mieg, 2015).

Industrial heritage sites have largely been influenced by the accelerated shift from manufacturing to cultural economies which the late twentieth century economic globalisation brought, and have witnessed an eclectic clustering of urban economic activities and specialized services (Hutton, 2000: 290). Its effects apart from being social, enabling “knowledge groups” (Hillier, 2016) to come together through specialised knowledge, they were also spatial, reconfiguring urban networks and upgrading the city’s status (Gospodini, 2006: 314).

With more than half of the world’s population now living in urban areas (United Nations, 2014), the shifting attention to industrial heritage sites is regarded to have a close connection with the search for a personal or collective past and identity (Polyák, 2015). However, in many countries today, they are being identified with promoting activities related to cultural, educational and economic growth, while creative industries are among the most common attractors (Fossa, 2015). What is indeed changing, according to Hillier (2016), is that cities are allowing for creativity by being spatially integrated, due to the scale of networks, their diversity and probabilistic accessibility.

The present research studies the role of industrial heritage sites in the context of Hillier’s (2016) fourth sustainability of the city; creativity, where he proposes that apart from the three city sustainabilities (energy, society and economics) which are the consequences of its spatial form, creativity allows the evolution of both social stability and morphogenesis via social networks. In this respect, the paper aims to analyse those tangible elements manifest in the spatial form of industrial heritage sites and distinguish those intangible attributes which constitute living expressions of their legacy. The main subject of the research is a comparison of two case studies: The Old Truman Brewery located in London, UK and Technopolis situated in Athens, Greece.

Through this comparison, the paper assesses the relationship between the current land uses incorporated in the syntactic form of these complexes and their effect in the density of public interfaces adjacent to them. The evaluation of these activities is crucial not only to capture patterns of spatial occupation and heritage management, but also to assess the synergy between these sites and their urban environment. Moreover, it intends to identify how people perceive intangible cultural heritage (ICH); that is immaterial cultural manifestations of the studied areas and whether this is achieved through a bottom-up or top-down process for

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each case study respectively. The objective is to provide a valuable understanding of former industrial sites' role in society and inform an integrated conservation strategy for preserving heritage values, while enabling creativity in the city.

1.1 The values of industrial heritage

Heritage has two fundamental values; the tangible, manifested through the built environment and the intangible, a value difficult to measure, expressed through interactions within a durable network of relations. In the heritage context, UNESCO (2003) defines Intangible Cultural Heritage (ICH) as evolving heritage, where tradition and innovation coexist.

Heritage is very often evidenced through tangible assets, such as monuments and buildings, while being assigned hierarchical definitions by committees and organisations, based on specific criteria and strategies. The dominance of this view, as stated by Smith (2006) and Meier (2013), has resulted in the widely-held concept that conservation is about preserving recognized concrete elements, which are later associated with certain heritage values. However, any tangible culture must be sustained by intangible value and vice versa for it to be visualised (Alkymakchy, Ismaeel and Alsoofe, 2012). This explains the reason why the Convention's definition of ICH includes elements of tangible heritage (objects, artefacts, cultural spaces) in order to maintain cultural diversity (UNESCO, 2003).

Intangible heritage values have always been tied to collective identities; from neighbourhoods to cities and sometimes regions, they have affected how physical, visual and perceived boundaries are formulated (Jigyasu 2015). Considering ICH in the context of industrial heritage is important, because the industry's evolution apart from producing redundant materials also generates a richness of everyday rituals and ways of life (Alfrey and Putnam, 1992). Despite the prevailing argument that ICH is often more vulnerable than tangible, this is not the case. Tangible heritage in reality requires investment and effort to maintain and adapt it to contemporary use. On the contrary, intangible heritage showcases in the biggest part resilience in structuring identity (Prosper, 2013 cited in Jigyasu, 2015). However, the tangible components often play an irreplaceable role in the manifestation of ICH, as mediators for carrying out collective memories and social activities associated with them (Jigyasu, 2015). Halbwachs (1992) first introduced the term collective memory, stating that memory entails a mesh of external relationships, figures and objects which embody the past. A close link with Bourdieu's (1986) 'social capital' can be identified, since it is in this sense that our individual memory places itself in the set of actual or virtual links that illustrate interactions within a durable network of relationships. Therefore, ICH represents a kind of 'recycling' process (Skounti, 2009: 76); recycling cultural facts and collective memories which become heritage.

This re-theorisation of heritage according to Blake (2009) has turned ICH preservation into an even more complex and political question, especially when considered in response to UNESCO's Convention (2003) for 'safeguarding'. Safeguarding is viewed as an important step in protecting cultural diversity and according to Blake (2009) and Jigyasu (2015), priority should be given to the local community, for ensuring its continuing maintenance, transmission and viability. However, there has been criticism (Smith, 2006, Hafstein, 2009, Smith and Akagawa 2009, Taylor, 2016) that the system of heritage is structured on (re)creating a system of inclusion and exclusion. Smith (2006) claims that heritage values are associated with power relations and with the power to qualify and disqualify cultures. Taylor (2016: 44) also questions the safeguarding of ICH as framed by UNESCO and argues that the act of 'heritagization' is a contradictory process, since it places emphasis on the simultaneous (re)production of both cultural groups and "a universalist standardization of culture" with regards to social organisation. She underlines that "rather than *preserving*, the task seems to be *reworking* traditional practices" (Taylor, 2016: 32). This debate stresses the role of ICH in shaping local, regional and even national identities (Blake, 2009, Skounti, 2009).

In an attempt to provide an integrative understanding of industrial heritage role in relation to urban development and creativity, this paper relates the use of space syntax techniques in urban studies with architectural morphology and cognitive mental maps. It is argued here that when both values of heritage are evaluated, they can inform more effectively a socio-cultural and economic strategy for preserving and adapting them.

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2. Datasets and Methods

Key to choosing the case studies were their urban transformations resemblance (Hanson, 2000); that is their spatial, social and historical evolution over time set in different cultural backgrounds. More specifically, both of them present similarities in terms of size, architectural morphology, building typology and more importantly, neighbourhood evolution within each city. In response to the heritage values stemming from the varying social background and geographical location, special reference is also made to the differences regarding the present urban environment and on-site heritage management.

a. The Old Truman Brewery, London, UK

The Old Truman Brewery located in the Spitalfields ward, is part of the Tower Hamlets Borough and covers 36,500 square meters on both sides of Brick Lane. The area contains some of the most historically and architecturally significant buildings in the Borough and has a cultural legacy of three successive immigrant groups (London Borough of Tower Hamlets, 2009). The brewing industry was active in the area since 1666; it expanded and grew throughout the 19th century, when the brewery became one of the largest in London, and for a brief time the biggest in the world (ibid, 2009). Poor and overcrowded housing surrounded the brewery for many years (Cornell, 2013) and until the early 1970s, industrial development at the Brewery continued, before it closed in 1988. The low-rise buildings along Brick Lane place emphasis on the Christ Church Spitalfields and the Brewery's Chimney, while stations such as Shoreditch High Street and Liverpool Street, are within a walking distance from the site (Figure 1). From 1991 onwards, it has been redeveloped as a major centre for the creative industries and today it is a family owned and managed site. Together with the famous Brick Lane Market, several markets are also part of the complex (Figure 2).

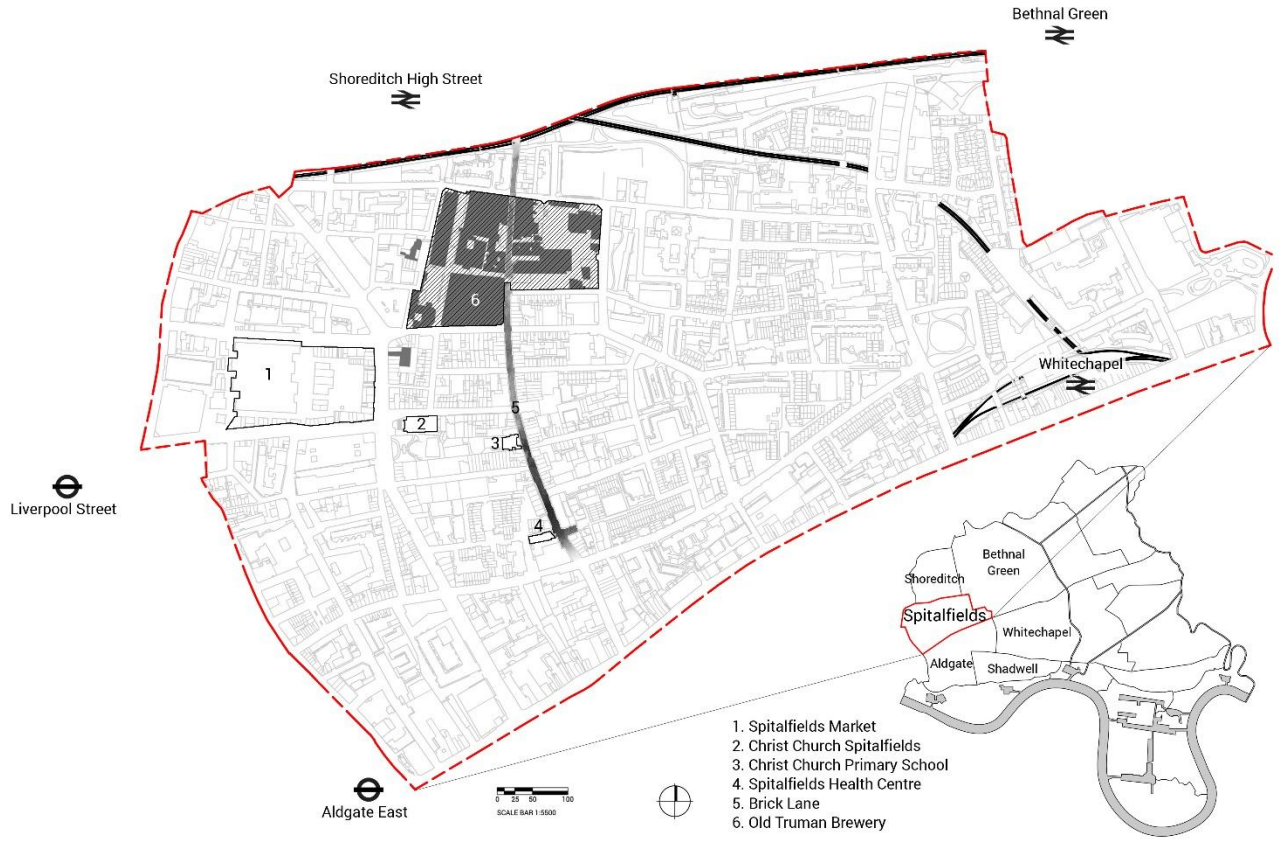

Fig. 01 Spitalfields landmarks with closest stations (left) and its location within Tower Hamlets (right). Source: Author´s elaboration

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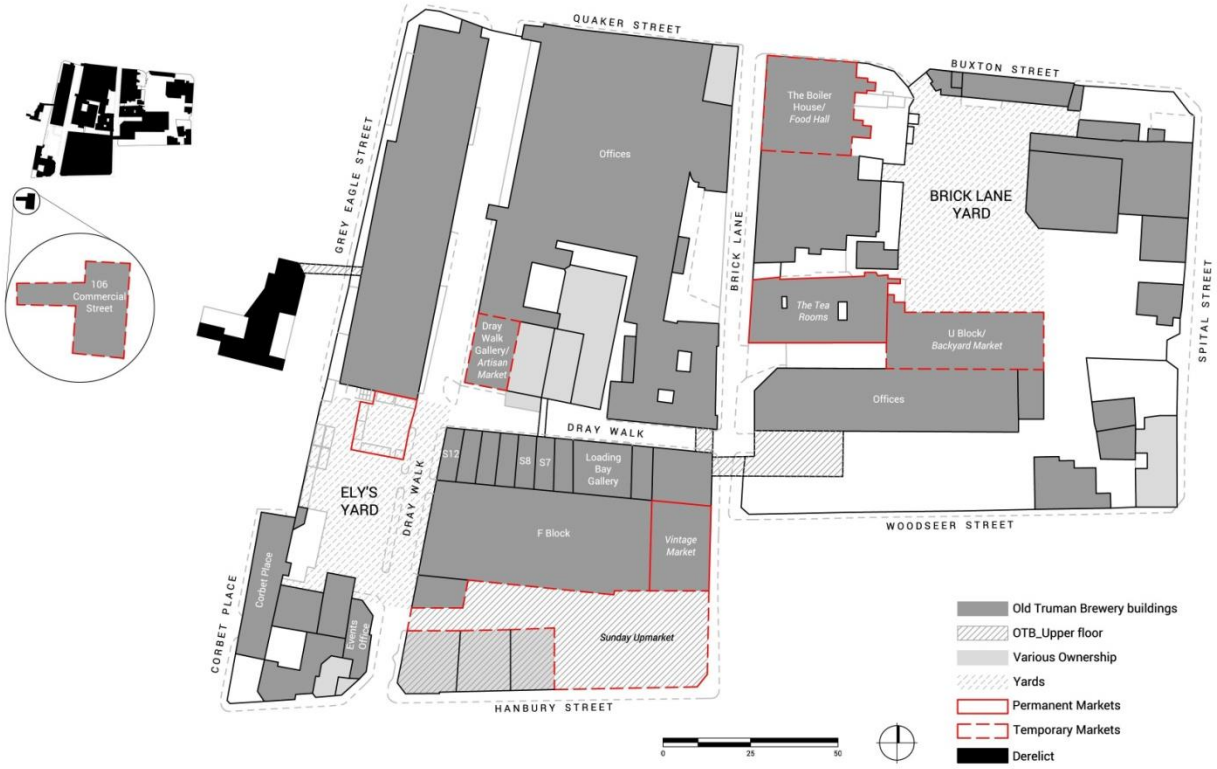

Fig. 02 The Old Truman Brewery today. Source: Author´s elaboration

b. Technopolis, Athens, Greece

In 1857, the Gasworks Industry, situated southwest of the central Athens sector was established, with the gradual addition of different buildings. The industry's foundation slowly led to the creation of an informal settlement known as *Gazohori*, which hosted its workforce. The district of 'Gazi' took its name from the industry, while its proximity to Pireos street, an important industrial axis, attracted commercial and industrial activities. In the 19th century, Gazi was "a miserable settlement" (Biris, 2005: 242); it illustrated unemployment, poor living conditions and was inhabited by low income classes. In 1984 the industry terminated its function and as a result the area became degraded. Gazi gradually emerged as an 'epicentre of recreation and culture' (Karachalis, 2007), together with the appearance of many freelancers and artists in the area. Since its establishment, the area's boundaries are considered to be constituted by its four primary traffic arteries, Konstantinoupoleos, Petrou Ralli, Iera Odos and Pireos roads. Gazi contains many distinct landmarks, while its main access point is through 'Keramikos' tube station (Figure 3). From 1986 onwards, the Gasworks Industry became listed and today, the former industrial site known as 'Technopolis', consists of 25,000 square meters (Figure 4). It is managed by the Municipality of Athens and within its grounds a wide variety of cultural and artistic events are hosted throughout the year.

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Fig. 03 Gazi landmarks (left) and its location within central Athens sector (right). Source: Author´s elaboration

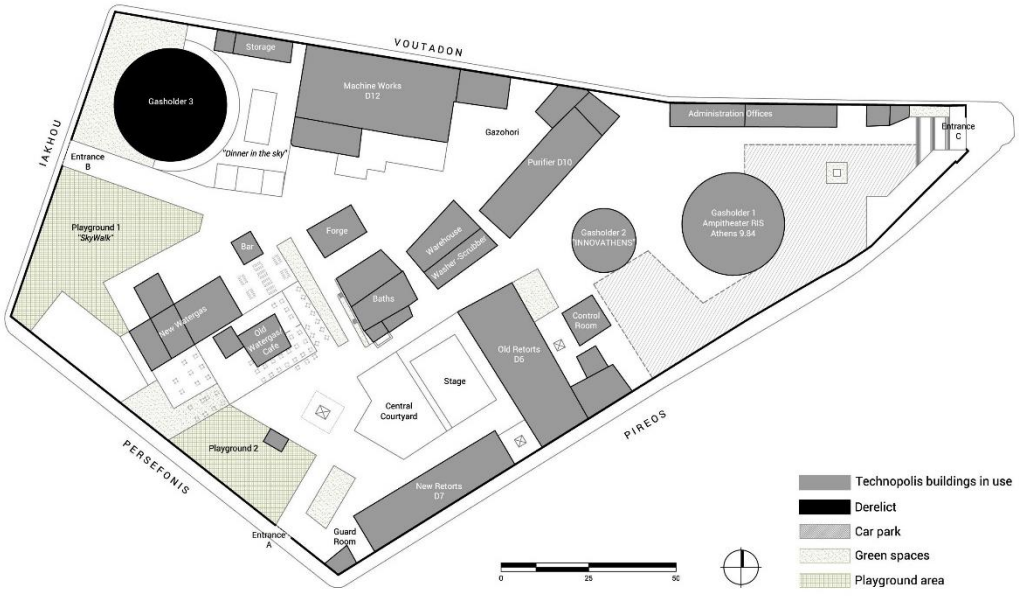

Fig. 04 Technopolis today. Source: Author´s elaboration

Methodologically, at the urban scale the structure of both industrial schemes is initially investigated through depthmapX (Varoudis, 2012), using the measures of normalised least angle choice (NACH) and segment angular analysis (NAIN) for different radii (400, 1200, 2000, n) to evaluate the industrial complexes' location within the dual form of the respective city; the foreground morphogenetic network driven by micro-economic

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activity set into the background network, driven by socio-cultural factors (Hillier, 2016). A patchwork map merging the foreground (angular choice at radius n) and the background (metric mean depth at radius 2000), reveals whether the schemes form part of these networks. In order to understand the processes of current growth and adaptation, a morphological analysis of the urban blocks in terms of land uses is conducted, set within a walking distance radius of approximately 400meters. Moreover, a frontage/boundaries analysis is carried out supportively with the land use, to study the interface between buildings and public spaces within each scheme.

Central to this research is the micro-functioning of each site; that is the way public spaces between the buildings are used by staff and visitors and how these are managed in accordance to the various events that take place. For the purpose of this analysis, snapshots are used to capture moving and stationary activities of visitors and staff members, record interactions and different activity types. The method was applied at three different time periods during one event weekday/weekend and one non-event weekday for both sites. Moreover, surveys including in total a hundred and four questionnaires and ninety-four mental maps were conducted in the form of short interviews. Two groups of people were approached; the ‘inhabitants’ and ‘visitors’, based on Hillier and Hanson’s (1984) concept. The term ‘inhabitants’ refers to people working in the area, while the term ‘visitors’ to outsiders who do not form frequent encounters. Together with the survey questions, participants were requested to do a quick sketch of each case study, highlighting entering/exit and destination points within the site, path markers which are important along the way and parts in which they feel unprotected. Visibility Graph Analysis (VGA) was applied to a selected mental map sample to reveal their visual integration values (at eye level); the visual distance from all spaces to all others (Hillier, 1996). This analysis is implemented in order to compare the actual visual zones of space with those of the mental one, identify any overlaps that might arise and uncover those elements that affect the perception of each site’s image. Where necessary, the drawings of each complex were adjusted to fit the mental maps created by the participants, which were also simplified and scaled for a comparable analysis.

3. Results

Utilising a diversity of approaches, from configurational to perceptual analysis, this chapter compares the studied cases and presents the findings of the research by synthesising the analysis outcomes under overarching topics.

a. Embeddedness

A patchwork map merging the foreground (angular choice at radius n) and the background (metric mean depth at radius 2000) networks of both cities; Greater London for the Brewery and Athens Prefecture for Technopolis (Figure 5 & 6), reveals that despite the fact that both cases seem to be towards the edge of the respective city centre, Technopolis appears globally more embedded than the Brewery. However, at the same time it seems to be detached from its urban environment, since the land uses incorporated in its syntactic form are disconnected from its surroundings (Figure 7). On the contrary, although the Brewery is part of the background network at a global scale, the land uses are embedded within its surroundings (Figure 8) and hence facilitate ‘contacts of the right kind’ (Hillier, 2016) to emerge.

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Fig. 05 Foreground (angular choice radius n) – Background (Mean Metric Depth radius 2000) for the Truman Brewery.
Source: Author´s elaboration

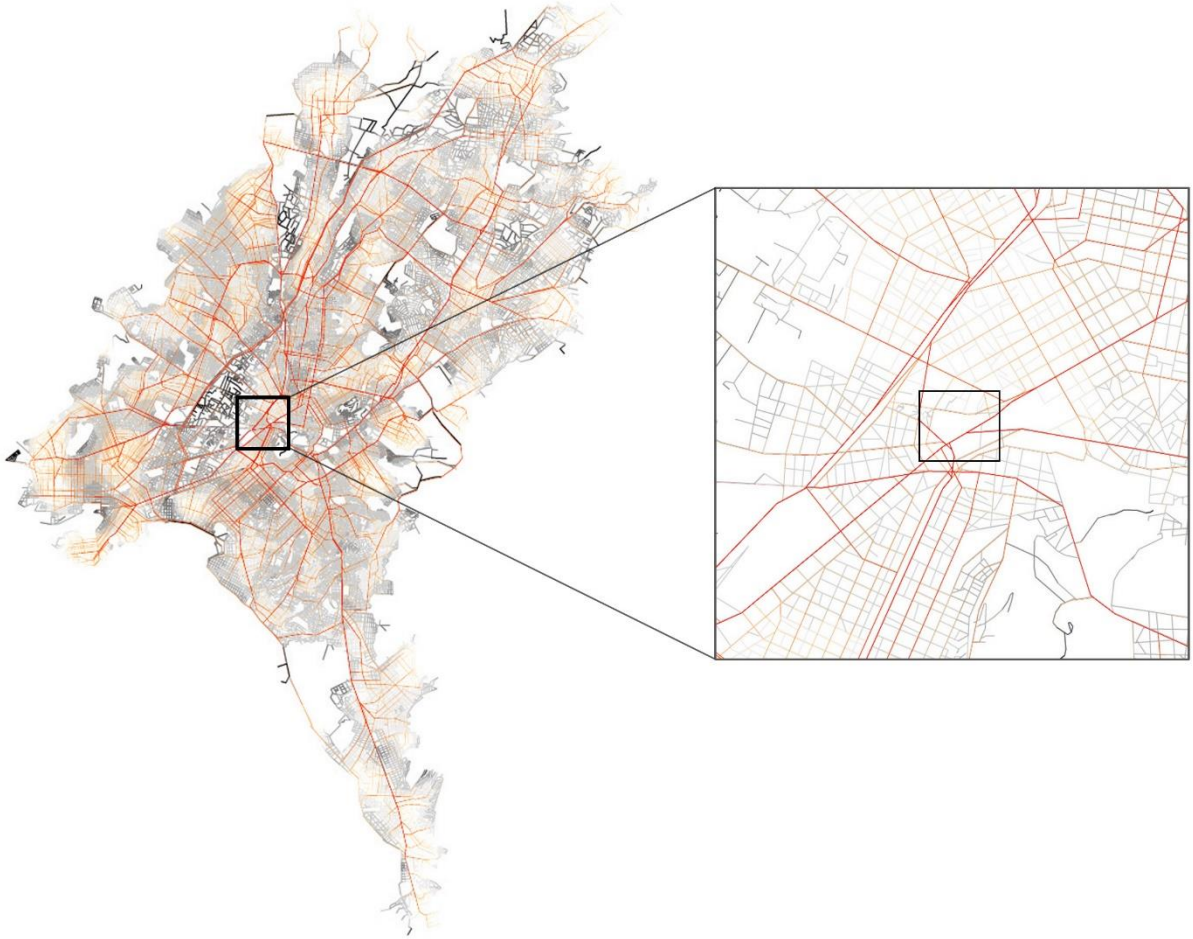

Fig. 06 Foreground (angular choice radius n) – Background (Mean Metric Depth radius 2000) for Technopolis.
Source: Author´s elaboration

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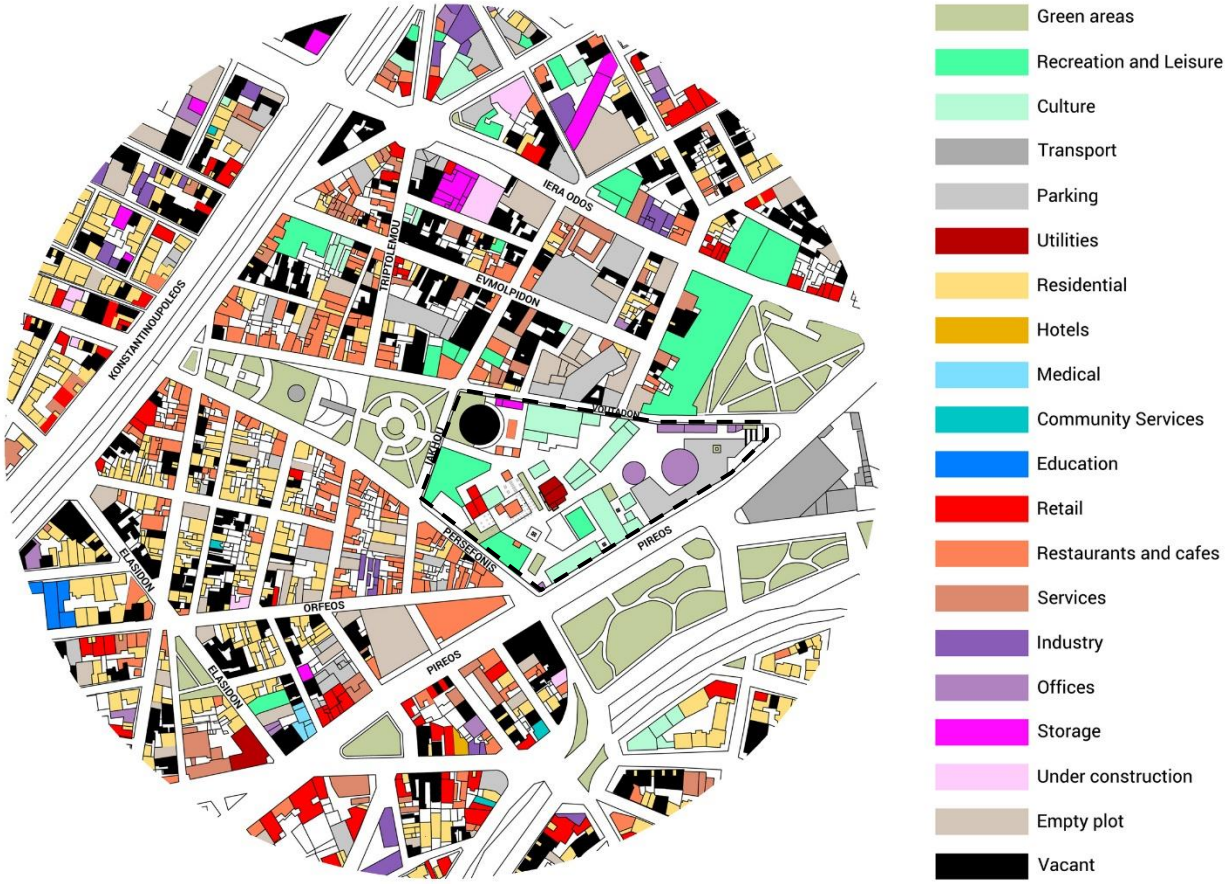

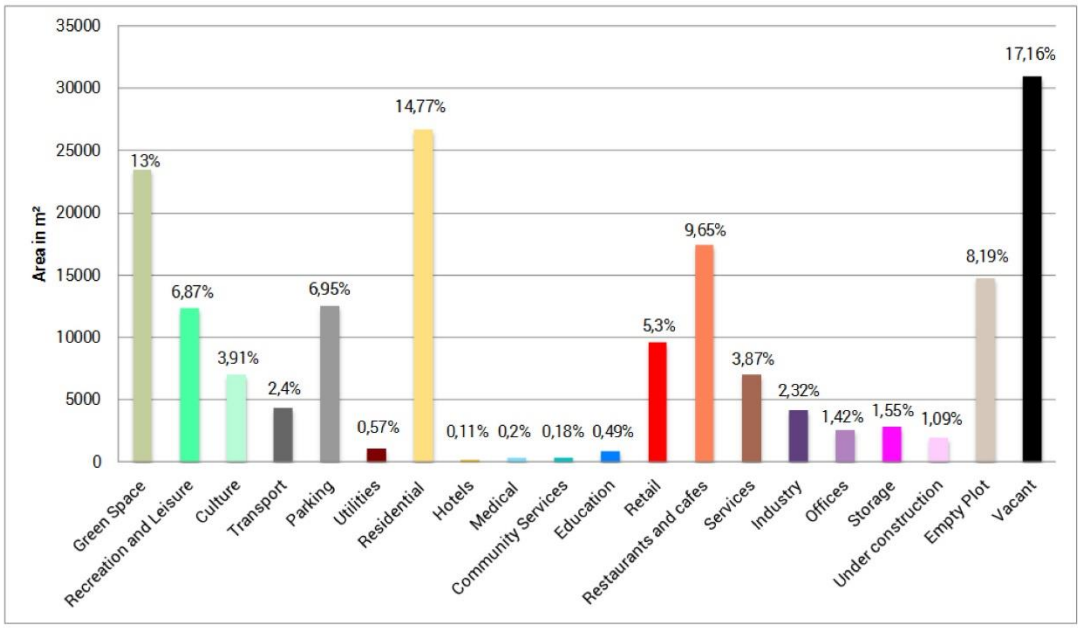

Fig. 07 Land uses (top) surrounding Technopolis at 400m radius, (bottom) within the scheme.
Source: Author´s elaboration

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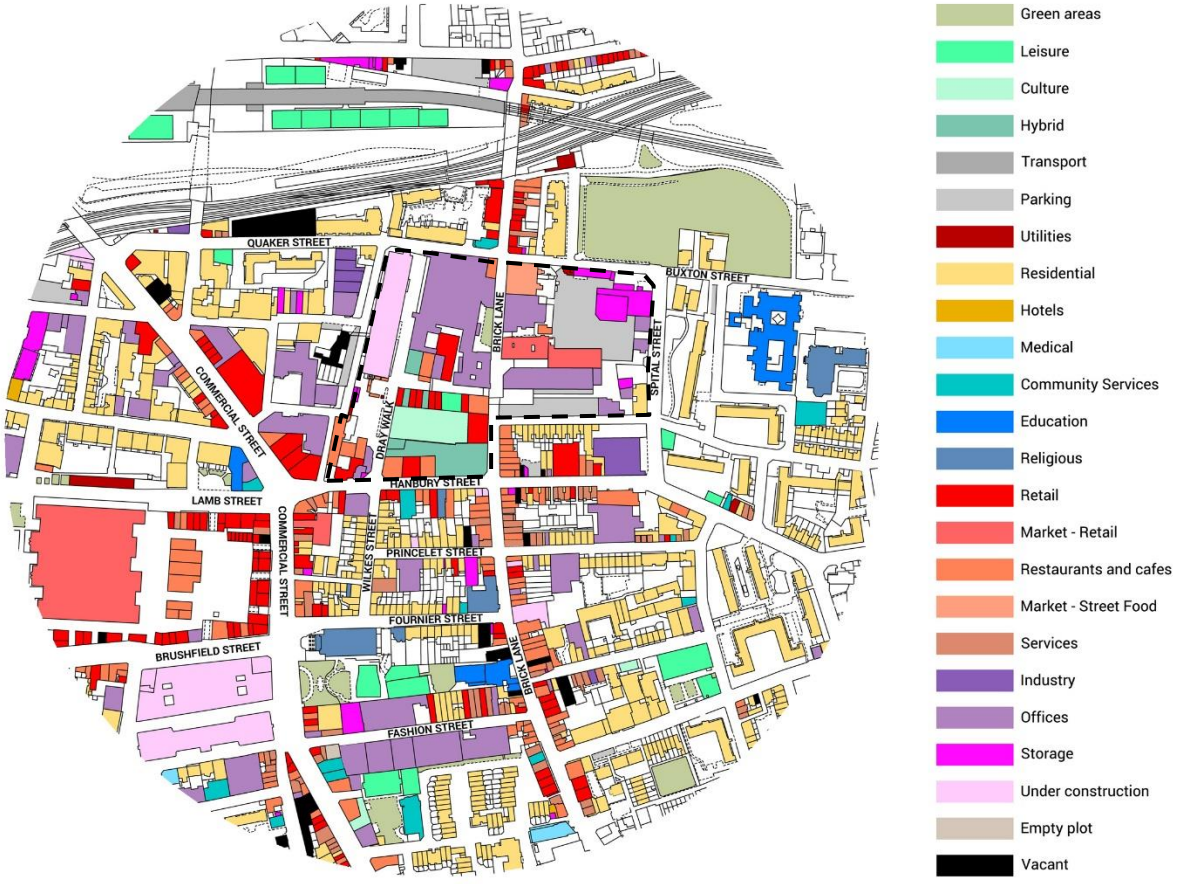

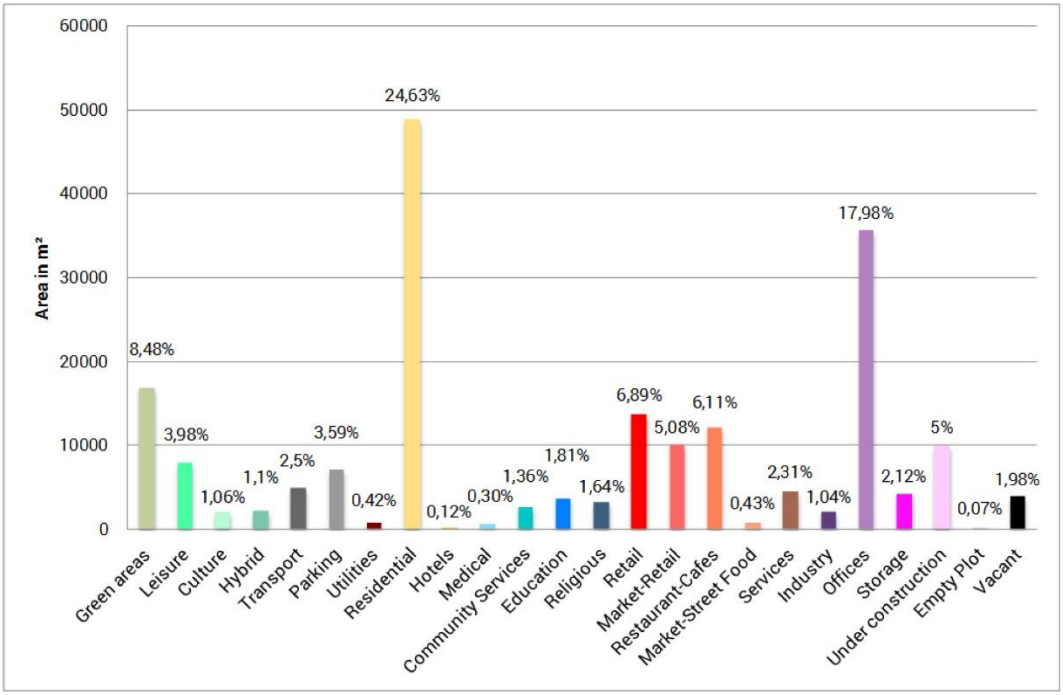

Fig. 08 Land uses (top) surrounding the Brewery at 400m radius, (bottom) within the scheme.
Source: Author´s elaboration

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The snapshots also support this observation, as it is noticed that compared to Technopolis, the Brewery illustrates more moving, standing and sitting activity throughout most of the days (Figures 9 a-b). This means that various user groups have often a reason to be there throughout the year, in contrast to Technopolis, whose visitors choose to go mainly when there is an event happening. However, 86% of the Technopolis inhabitants feel that they belong on site, opposed to 54% of the Brewery's inhabitants. This illustrates that the latter's temporality of the working environment conditions makes it a socially transforming hub. In general the Brewery is depicted to blend in with its surroundings, while Technopolis is represented as a distinct entity.

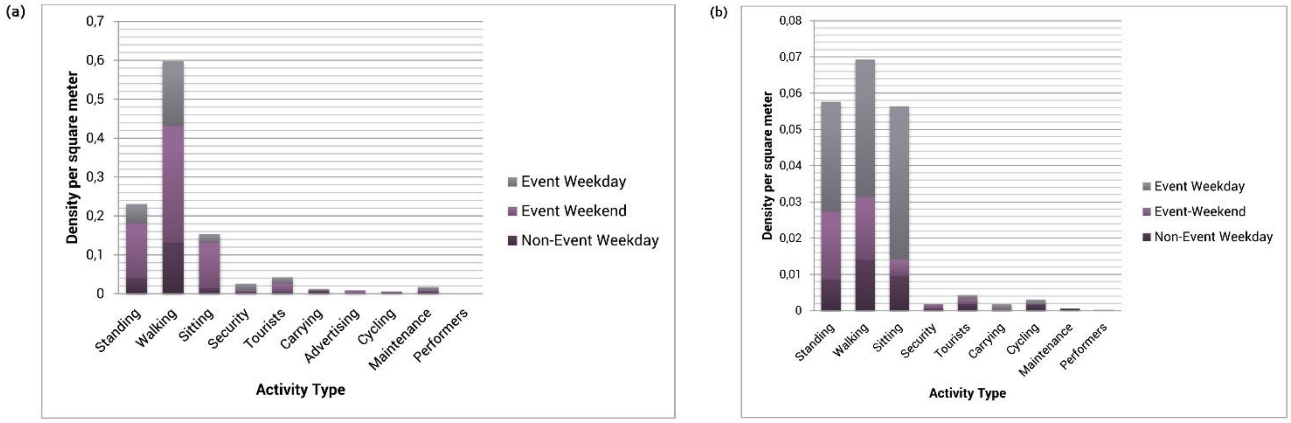

Fig. 09 Overall snapshots for (a) the Brewery, (b) Technopolis. Note: Density per square meter differs due to the varying size of the observed areas. Source: Author´s elaboration

b. Experiential diversity and structure

Based on the spatial analysis of the site observations, it is suggested that the clustered arrangement of land use in the studied Spitalfields area, combined with the creative, business-oriented environment of the Brewery complex establishes a corresponding dynamic social structure. The Brewery's inviting character towards the south and central part, together with the proximity of its active frontage entrances (Figure 10a), results in a concentration of activities and in the animation of the public environment; therefore enhancing its spatial-social synergy. It allows groups to move from smaller spaces to larger ones and from their private towards the public zone giving "a greater feeling of security and a stronger sense of belonging to the areas outside the private residence" (Gehl, 2011: 59).

On the contrary, Technopolis set within a configurationally looser urban environment, while at the same time being closed-off from its surroundings (Figure 10b), constitutes a cultural 'urban island' on its own. Therefore, as far as its social function is concerned, it requires strategic alternatives related with the design of its organisation (Peponis, 1991) to draw people in. The presence of structure in the Spitalfields area evidenced through the land use, illustrates also greater diversity, in contrast to the Gazi area, where a mono-functional layout of restaurants/cafes and residences is distinguished. This explains why different usage patterns are significantly affected by the spatial configuration of each site.

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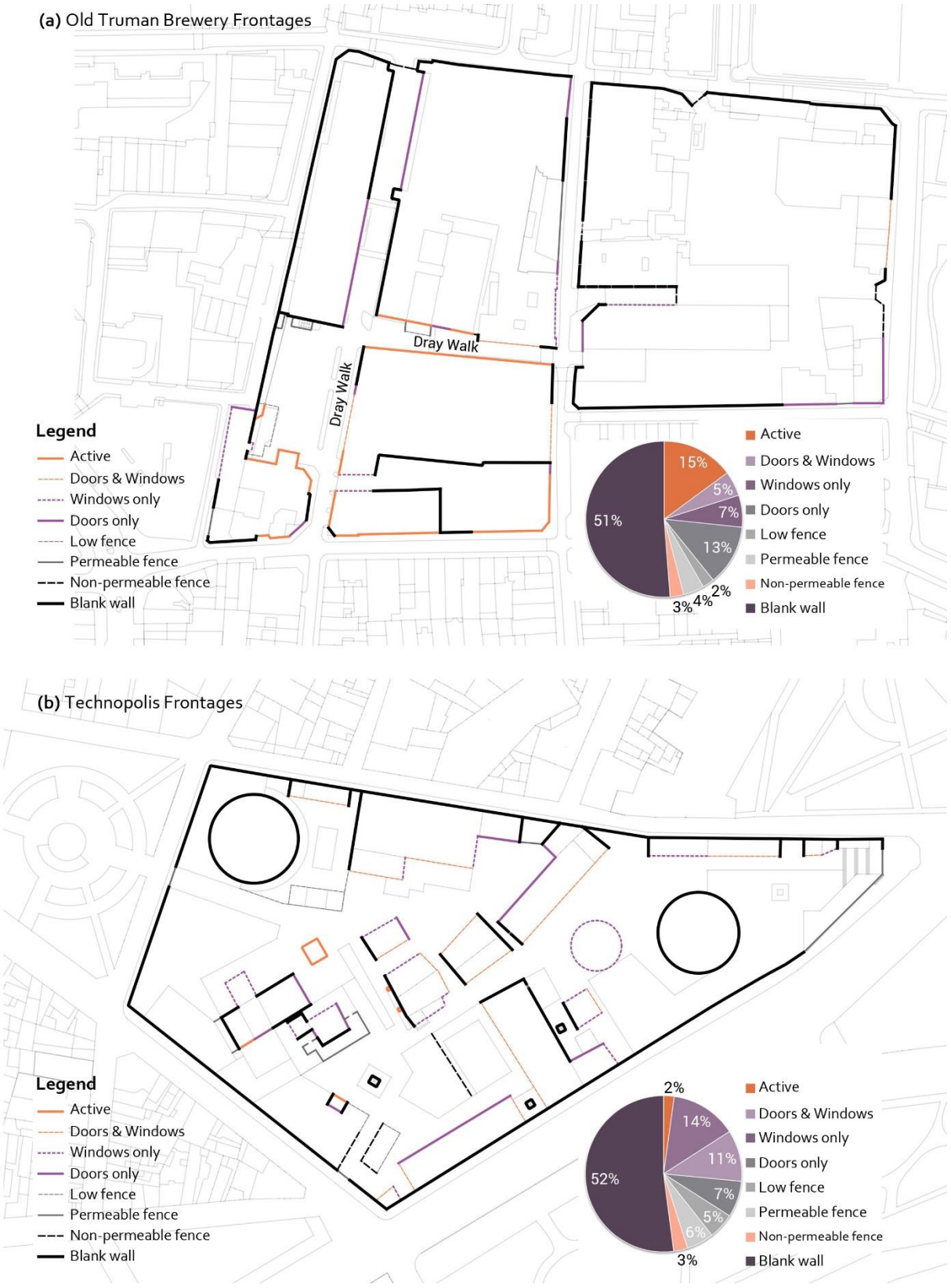

Fig. 10 Frontage analysis for (a) the Brewery, (b) Technopolis. Source: Author´s elaboration

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Land use diversity however, is not enough on its own. The questionnaires and mental maps revealed that experiential diversity is also important, since movement patterns, behaviours and human occupation density, all play a crucial role in shaping the urban environment. Furthermore, vacant buildings and empty plots constitute only the 2,05% in comparison with 5% of under construction buildings in the Brewery area, illustrating that the district is an outcome of highly structured sets of socially, economically, culturally and physically related systems in space (Penn et al, 2009). These sets are crucial for generating creativity, as they influence social networks, which are mainly driven by non-spatial factors (Hillier, 2016). Furthermore, the hybridity of many uses embedded in the Brewery, illustrates that enabling contacts between groups definitely constitutes the scheme's success in structuring and maintaining its development (Allen, 1977, Hillier, 2016). Although Technopolis is globally recognised as a cultural centre, its spaces are not used to its maximum throughout the observed period. The latter, together with its physically closed-off structure intensifies contacts only within existing groups and misses the benefits stemming from diffused networks, such as those evident in the Brewery. Therefore the maintenance of this twofold relation between social advantage and space is crucial for placing heritage in the heart of community development.

c. Atmosphere/Vibe

It has been argued by Hillier (1996: 4) that buildings "constitute the social organisation of everyday life as the spatial configurations of space in which we live and move". Research carried out for workplace environments (Sailer and Penn, 2009) revealed that organisation and space relate in a very intricate way, as they depend on context, culture and character.

Drawing on this framework, it is argued that the Brewery's context generates high levels of movement flows throughout all days. More specifically, the retail along Dray Walk stores draws people in, encouraging encounters and attaching a familiar character. This as a result creates co-presence between different users and overall works positively for the 'movement economy' (Hillier, 1996) of the place. On the contrary, Technopolis seems to be more static in its interior, due to its cultural use. However, being a landmark for the wider area and for the city itself, it functions as an attractor, aggregating multiple uses along its surrounding streets, which on their turn affect the area's character.

As far as differences in culture are concerned, it is suggested that the interplay between the material and immaterial elements affects the feeling of belonging and people's perceptions about each site. More specifically, the enclosed morphology of the Technopolis complex and the concentration of administration/office buildings towards the east part of the site, promotes intimacy in the working environment. On the other hand, the general vibe/diversity of the place is the reason why 46% of the Brewery's inhabitants feel part of a community. The constant change of activities on site coupled with the diffused working spaces of the Brewery is proposed to be the reason why the general atmosphere dominates above the working environment. This is also evident in the Brewery's participants' mental maps, who emphasised activities over the built environment, in contrast with Technopolis' participants, who featured built landmarks as crucial elements in depicting context and character. Therefore, it is proposed that culture, memories and built elements are those attributes associated with Technopolis atmosphere, while creativity and socio-spatial diversity those for the Brewery.

d. Transition Zones and Perceptions

Although there are similarities between the studied cases, the existence of recreational, retail and restaurant/cafe facilities within the Brewery appear to be an element of invitation (Gehl, 2011); public space is exposed due to its immediate visibility from the surrounding high-movement streets. The proximity to many local businesses together with the intensification of activities in the Brewery, especially when events and markets co-exist, generates a concentration of multiple user groups. The same happens in Technopolis when festivals and exhibitions take place. However, the concentration of similar user groups in the Brewery, evident through the given descriptions and observations, explains the difference in the individuals' perceptual relatedness with each scheme. It is argued that in most contacts a very conscious use of distance is involved, in which individuals may relate to each other in two ways: either by means of closeness (spatiality) or conceptual closeness (transpatiality) (Gehl, 2011, Sailer and Penn, 2009). The latter seems to be the case for the Brewery, while spatiality seems to play a crucial role for drawing people in Technopolis.

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In the same way that an individual is linked with a spatial and a conceptual group (Hillier, 2016), distances can also have a conceptual dimension. The mental maps highlight that participants in both schemes, identify points of interest or most frequently visited spaces as being closely linked, while in reality they are located far from each other (Figure 11). Inhabitants of both complexes depicted in detail spaces they occupied, with an exception of those who regularly moved around the site, the majority of whom portrayed a holistic understanding of each site's layout. On the contrary, most visitors portrayed generically each scheme, by distinguishing landmarks, which acted as reference points for moving around.

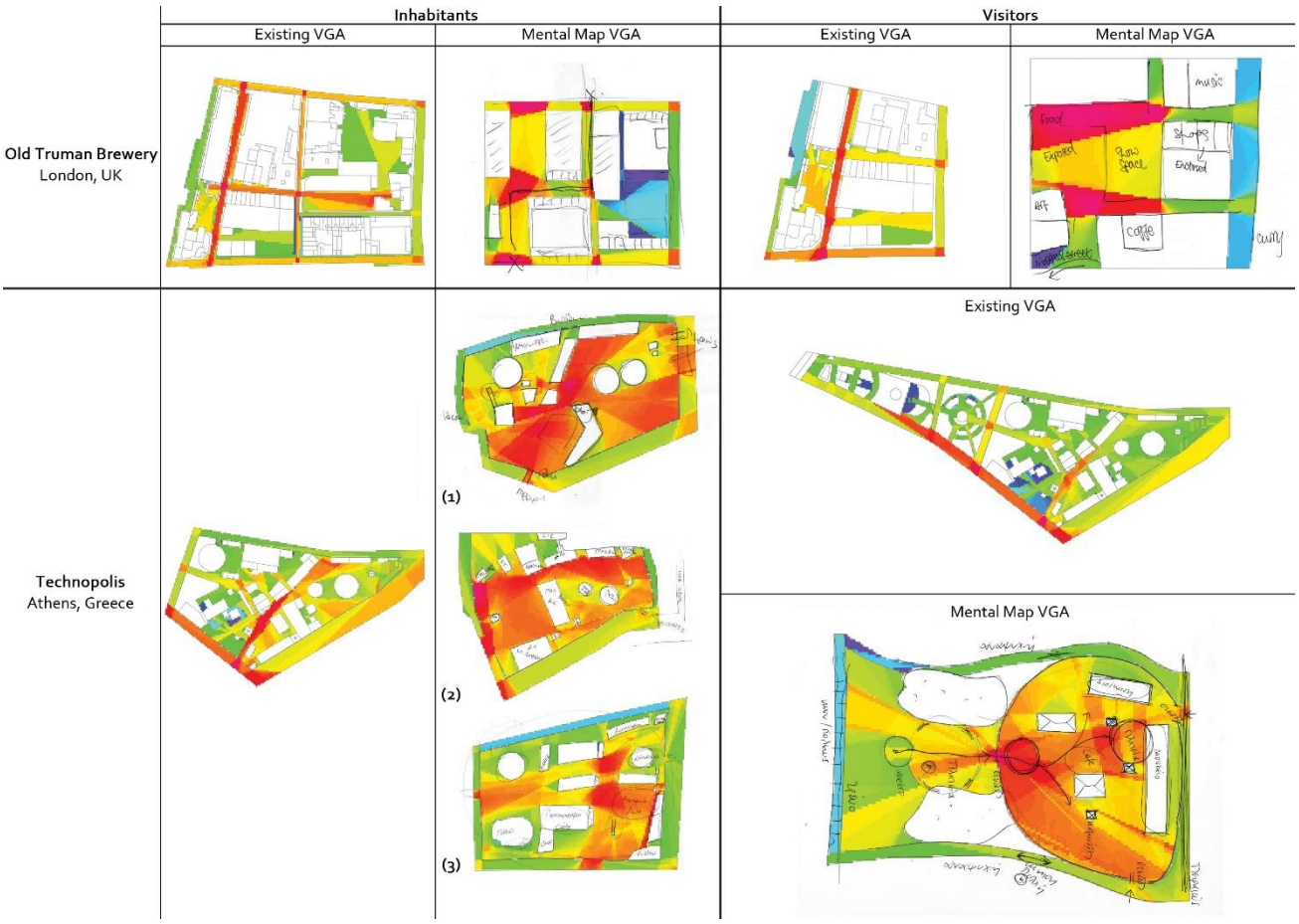

Fig. 11 Visual Integration Analysis for both schemes, comparing the existing area map with the participants' mental one sample. Source: Author´s elaboration

Activities also, apart from defining distances between places, seem to outline transition zones. Transition zones are observed to be determined by large open spaces or by elongated narrow ones, where people and activities aggregate, by smaller artefacts, such as installations, and graffiti or even by smells. Brick Lane for example, despite passing through the Brewery's buildings, is identified as a transition zone, due to its multicultural character and the aggregation of many curry restaurants. On the other hand, due to its large external area, transition zones within Technopolis are characterised by visually integrated spaces outlined by built elements. This is also the case when the analysis is applied to the surrounding public spaces. Although the complex as a whole is visually segregated, the visitor's mental map highlights it as a visually integrated space, underlying the feeling of protection stemming from the visually enclosing elements of space.

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e. Industrial construct interfaces and heritage value

The life cycle of events and activities is proven to be a crucial factor, both in terms of heritage management and in strengthening community participation, but also in 'safeguarding' and continuum of ICH. This is particularly evident with the Brewery, which is treated as an evolving and productive site, by enabling opportunities for people to meet organically. Technopolis on the contrary, which is managed more statically, accommodating only periodic events, illustrates an inanimate flow of socioeconomic activity.

In order to ensure integrated development and accommodation of change in industrial sites, attention should be paid to a symbiotic relationship between environment and stakeholders. Both sites and Technopolis in particular, illustrate signs of gentrification, as evidenced through the land use and interviews with participants. In the latter, the residences surrounding and overlooking the industrial site are many, highlighting the fact that stakeholders have already taken advantage of its 'heritagization' and reproduction of cultural groups. This is also due to the "musealisation" and "aestheticisation" (Hauser, 2001) transformation strategies that Technopolis has undergone, converting it into an attractive destination throughout day and night. On the contrary, the largest part of the Brewery illustrates a different developmental approach; utilising the building's shells to their fullest, enables events to take place and facilitates connections between similar social groups. For this reason, ICH is argued to be perceived by the Brewery's users as a bottom-up process, while for Technopolis as a top-down.

4. Conclusions

Concluding, this paper investigated the relation between industrial heritage and intangible cultural heritage through a comparison between the Old Truman Brewery in London and Technopolis in Athens. In an attempt to evaluate their spatial performance and highlight those configurational, morphological and perceptual elements that constitute heritage values, an analysis was carried from the urban to the building scale. The aim of the study is to deepen the understanding about industrial heritage sites in initiating future urban development strategies.

Concerning the configuration of the studied cases, it was found that embededdness, together with local to global spatial relations are essential in creating and sustaining a time-bound productive development. Both case studies highlighted that spatial location and street network global integration play an important role in attracting people, but are not enough on their own, since 'contacts of the right kind' (Hillier, 2016) are facilitated through diffused social networks. As far as the synergy between the current land uses incorporated in the form of the case studies and their effect in the density of public interfaces adjacent to them is concerned, it was found that the morphology along with the amount and type of activities which take place on site operate as attractors, creating a dynamic social structure. The land uses, snapshots, questionnaires and mental maps revealed that enabling and maintaining a life cycle of events is crucial for ensuring continuation, since the mix of different user groups together with activities can generate a self-reinforcing process (Gehl, 2011). Moreover, the flexibility in the accommodation of new uses and social groups, achieved through highly structured sets of socially, economically, culturally and physically related systems in space, is suggested to generate experiential diversity.

Additionally, as far as social network facilitation is concerned, the Brewery revealed that the more programmed an industrial site is, the more its heritage tends to be linked with intangible assets, while the more conservative, it tends to be identified with tangible assets, as in Technopolis. The former is important for achieving urban integration, since it is through the existence of conceptual groups that non-local relations can be created (Hillier, 2016). Nevertheless, this does not necessarily mean that spatially induced density is not important. The Brewery, being open and outward-facing to its biggest part, blends-in with its surroundings, whereas Technopolis being enclosed and inward-facing, stands out. Furthermore, an interdisciplinary approach regarding heritage management and community participation seems to affect people's perception of ICH. The adaptation and hybridity of the Brewery's spaces appears to have strengthened intercultural dialogue and cultural diversity, which is argued to be important for the 'safeguarding' of its ICH. In the Brewery, ICH is proposed to have emerged as a bottom-up process, since it is embraced through the dominating atmosphere/vibe, the socio-spatial diversity and the transpatial relatedness of its users. On the contrary, ICH in Technopolis is suggested to be perceived by both user groups as a top-down process, since the participants' mental maps highlighted the site as an enclosed entity and placed emphasis on its tangible elements over its activities; denoting the dominance of its "heritagisation" process.

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Finally, the present paper has suggested that *palimpsest industry* can be considered as the integration of multi-layered narratives, user experiences, perceptions and cultures. Finding the balance in conserving and managing existing resources, while enabling a sustainable development, is crucial for the future continuation of industrial heritage sites.

This paper forms part of a larger study carried out through the author's MSc dissertation. The main limitation of the research was the restricted period provided to gather the necessary data for the analysis; hence the studied cases had to be constrained. Further research on similar sites built in different cultural contexts and using a wider sample of participants is required to fully support the fore mentioned findings. Also, a historic research combining configurational and land use evolution would be of particular interest to investigate sustaining typologies and trade patterns over time that could possible form part of each area's ICH. Land uses and frontages in a wider area could also be further examined to formulate a holistic image of each district, while snapshots could be carried out systematically for the rest months of the year. Additionally, a quantifiable analysis of the mental maps could also be further examined by correlating the data presented in the maps and the actual structure of each case study. Together with space syntax, this could potentially lead to measuring people's perception and a way into mapping intangible culture.

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