Investigaciones
TURÍSTICAS

The redistribution of the Tourist Flow in Destination (TFD) from spatial-temporal concentration. Seville is flowing

La redistribución del Flujo Turístico en Destino (TFD) desde la concentración espacio-temporal. Sevilla fluye

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ABSTRACT

This research aims to interrelate how the spatio-temporal behaviour of tourists in the historic centres of urban destinations shapes the Urban Tourist Precincts (UTP), based on the analysis of tourist flows and the delimitation of the different tourist areas. For this purpose, the city of Seville has been used as a case study, as it is the third urban destination in Spain with the highest number of visitors and overnight stays per year. In terms of methodology, interviews with tourist guides, direct observation techniques and GPS tracking technology are used to quantify and follow tourist groups en route, thus obtaining the different types of Tourist Flows in Destination. This study shows how the time-space behaviour of the demand is one of the main variables shaping the UTP. Also, using different techniques, differences have been found between guided (traditional and free tours) and non-guided tourists.

Keywords: concentration of visitors; tourist flows; spatial-temporal behaviour; urban tourism precincts; Seville.

RESUMEN

Esta investigación busca interrelacionar cómo el comportamiento espacio-temporal de los turistas en los centros históricos de los destinos urbanos da forma a los Recintos de Turismo Urbano, a partir del análisis de los flujos turísticos y la delimitación de las diferentes zonas turísticas. Para ello se ha utilizado como caso de estudio la ciudad de Sevilla, por ser el tercer destino urbano de España con mayor número de visitantes y pernoctaciones al año. En cuanto

a la metodología, se utilizan entrevistas con guías turísticos, técnicas de observación directa y tecnología de seguimiento por GPS para cuantificar y rastrear los grupos de turistas en ruta, obteniendo así los diferentes tipos de Flujos Turísticos en Destino. Este estudio muestra cómo el comportamiento-espacio temporal de la demanda es una de las principales variables que moldean el UTP. Asimismo, con el uso de diferentes técnicas se han encontrado diferencias entre turistas guiados (tradicional y free tours) y no guiados.

Palabras clave: concentración de visitantes, flujos turísticos, comportamiento espacio-temporal, recintos de turismo urbano, Sevilla.

I. INTRODUCTION

The 21st century has witnessed a good number of studies on the behaviour of tourists in urban destinations: their motivation, their decision-making processes, their purchasing behaviour, as well as their stay in a specific area, in which the tourist activities, products and experiences offered in general are concentrated (Lew & McKercher, 2006; Xiao-Ting & Bi-Hu, 2012). Regardless of the field of study from which it is approached, whether it is based on the endogenous conditions of the tourist or taking into account exogenous factors with respect to these, it is clear that their behaviour takes place in a specific space and time (Shoval, 2018).

Based on the fact that tourists are a fundamental public objective in urban and tourist planning, especially in cities with a high degree of tourism, it seems relevant to know and provide public administrations with information about both their spatial and temporal behaviour and their forms and habits of travel, as well as the urban transformations which result from this (Ashworth & Page, 2011).

The analysis of the spatial-temporal behaviour of tourists is currently a key aspect for the management and planning of destinations, acquiring greater importance in tourist cities, where massification is a daily concern on the agenda and represents one of the main challenges that public administrations must face (Dejbakhsh et al., 2011).

Knowing the patterns of tourist use of space is the first step in establishing solutions to tourist overcrowding. The adoption of measures such as alternative signage, the promotion of secondary nodes, the creation of dissuasive itineraries or the control of carrying capacity can be useful instruments to counteract the adverse effects derived from excessive concentrations of tourists (Zhu et al., 2017).

However, from an academic point of view, it should be noted that although in recent years there has been a proliferation of studies on the mobility and movement of visitors in urban destinations, addressing issues such as massification or planning (Bauder, 2020; Caldeira & Kastenholz, 2020; Freitag & Bauder, 2018; Shoval, 2018; Shoval et al, 2020) few have been related to the identification of areas characterized by their tourist functionality and the role they play in cities (Lepan, 2013; Mou et al., 2020).

The city of Seville has positioned itself, today, as one of the most visited destinations in Spain. Its local tourist system, as stated by Marchena & Hernández (2016), reflects the articulation of the urban transformations produced, such as mobility, public space, urban quality, facilities and economic development itself. Tourism represents 12% of Seville's economy, with 3,121,932 tourists, almost 7 million official overnight stays per year, and an

average annual occupation of 76.4% (SNI, 2019). The number of visitors to Seville has increased progressively since 2013 (SNI, 2013), with a 64.2% increase in 2019 over this period making it the third largest urban destination in Spain, after Madrid and Barcelona (SNI, 2019).

Today the city, with 699,005 inhabitants (Seville City Hall, 2020), projects an image of international tourist destination, issues that are materialized in its appearance in 2018 in the Top 1 of the 10 best places to travel according to Lonely Planet or in the declaration of the Plaza de España as a fashionable monument in TripAdvisor. This is due to factors such as the monumental and cultural attraction internationally recognised as a World Heritage Site (UNESCO, 1987), its urban renewal and the expansion of its tourist offer over the last thirty years (Marchena & Hernández, 2016; Villar & Fernández-Tabales, 2017); and the increase in tourist demand towards urban destinations, in general, caused by various reasons such as the boom of low-cost air transport and the increase of intraregional travel in Europe, the proliferation of short stays, the growth of city-marketing and the expansion of the urban leisure offer, the lowering of accommodation costs through P2P platforms or cruise tourism in the case of port cities (Milan, 2017).

The starting hypothesis of this research is related to the influence of the spatio-temporal behaviour of tourists in shaping the tourist space of cities, which can be measured through tourist flows. Thus, the aim of the work is to interrelate the spatio-temporal behaviour of tourists in the historic centre of urban destinations, and more specifically in the city of Seville. The analysis of tourist flows is shown and represented, taking into account the itineraries that tourists follow with tourist guides (traditional and free) and those that are not, as well as the rest areas that facilitate distribution to other areas of the city. Finally, the form of the Urban Tourist Precincts (UTP) is defined, according to the spatio-temporal tourist behaviour, so that they serve for the redistribution of tourism and are useful as an instrument of planning and public management of urban destinations.

II. THEORETICAL FRAMEWORK: DELIMITATION OF CONSUMER SPACES, SPATIAL-TEMPORAL CONCENTRATION OF TOURISTS AND TOURIST FLOWS.

A city is divided into districts or precincts which are usually formed around activities of industry, commerce, sociability, domesticity and/or collective identity (Stevenson, 2003). Under this functional division of cities, the urban can be delimited according to its tourist use. The parameters which support the consolidation and creation of tourist districts are mainly based on the presence of tourist supply and demand (Hayllar et al., 2009). With regard to the latter, and in relation to our object of study, it should be added that one of the main variables which determine the delimitation of tourist areas are tourist flows, that is, the mobility of tourists in the destination itself, as well as their behaviour and spatial-temporal concentration in the public space of the city (Bauder, 2020).

The delimitation of spaces of consumption for tourists has been a focus of interest in the geography of tourism since the 1970s. There is abundant literature dealing with the identification and characterisation of areas with a predominance of tourism (Table 1).

Table 1. Concepts associated with the spatial delimitation of tourism

Denomination	Acronym	References
Recreational Business District	RBD	Meyer-Arendt, 1990; Stansfield & Rickert, 1970; Zhu et al., 2017
Central Tourist District	CTD	Bauder, 2015; Burtenshaw et al., 1981
Tourist-Historic City	THC	Ashworth et al., 1988; Escudero-Gómez, 2020
Consumption Compounds	CC	Mullins, 1991
Areas Specialized in Tourism	AST	Weaver, 1993
Tourism Business District	TBD	Aina, 2019; Annisa et al., 2016; Getz, 1993; Yi & Xiao, 2018
Tourism District	TD	Pearce, 1998
Tourist Areas	TA	Maitland & Newman, 2004
Urban Tourism Precincts	UTP	Dumbrovskà, 2017; Hayllar & Griffin, 2005; Manea, 2018; Wearing & Foley, 2017

Own elaboration

In relation to our object of study we consider the use of Urban Tourism Precincts (UTP), as it refers to the recognition of both space and residents, so that activities, the use of land or architectural interaction can shape the visitors experience within that space. The UTP is a changing space, which can evolve in different ways, and even be created and maintained so as to maximize the economic results derived from tourist impact on consumptions (Hayllar et al., 2009).

In the case of historical cities, their tourist attraction lies in their past, a fact that is materialised in their historical centres and in the different elements that they can house (churches, palaces, museums, cultural institutions, popular architecture, urban landscape, idiosyncrasy, etc.). Consequently, we find that in this type of destination the UTP usually coincides with the historical centres, spatially delimiting tourist activity and being the setting in which visitors carry out their spatial-temporal behaviour (Shoval, 2018).

In this way, the concentration of visitors in such spaces, as well as their mobility, are characteristic features of tourist activity (Lew & McKercher, 2006). Visitors do not only move to a destination, but in that same destination they also move according to multiple factors, which causes them to be concentrated in the same space-time (Caldeira & Kastenholz, 2020). In this way, the urban environment where visitors carry out their mobility becomes a space of practical concentration, which represents or houses the tourist offer and configures the image of the city (Shoval et al., 2020). It is in this space that tourist activities take place, which is usually made up of nodes and routes, often becoming a labyrinth due to the tourist's lack of knowledge about the destination (Donaire et al., 2015).

This movement of people becomes a central feature of travel and is a constitutive element of the definition of tourism (Schmude & Namberger, 2010). In fact, it can be said that tourist traffic through urban spaces is one of the main variables to be taken into account for the spatial delimitation of the UTP in a given city (Wearing & Foley, 2017).

It should be added that this route taken by tourists is the result of the sum of dozens of small decisions, which are based on a series of factors that define tourist flows through the city's tourist space (Galí, 2009). Trujillo (2015: 3) states that "tourist flows can be defined as the quantified result of visitors moving through different areas during their stay at the destination. They can travel on foot or by car or bus". At present, this definition would be incomplete, as tourist mobility patterns have changed, since in most destinations visitors have a variety of means of transport at their disposal for their journeys (Novy, 2018, Tripathy, 2018), whether public, such as the metro or tram; or private, which in many cases become resources which complement the city's tourist offer (tourist buses, bicycles and similar, "segway", electric scooters, "tuk", etc.).

For this reason, it has been decided to rename this concept as "Tourist Flow at Destination" (from now on TFD) (Figure 1) so that it acquires greater legitimacy, as well as incorporating a new definition more in line with the reality of tourism. Therefore, we consider TFD as "the quantified flow of visitors who, during their stay in the destination, move from one geographical point to another in order to visit a tourist product, consume a service or satisfy a basic or tourist need. This can be done on foot, in their own vehicle or through the means of transport and mobility systems (public and private) offered by the destination". This concept, in short, refers to the most common routes that tourists take during their stay in the destination, which can determine the streets, avenues and public spaces they choose and which allows them to be classified at different levels according to the influx of tourists.

In relation to the TFD, it should be borne in mind that tourists also stop and rest along their routes through the UTP. Thus, with regard to the consumption of this public space, it is possible to find certain rest areas or "distribution nodes" as Galí (2009) calls them, which are used for this purpose and which correspond to those areas which, due to their characteristics, are capable of bringing together a large number of people in the same space-time. In our research, we will call them Rest Tourist Zones (RTZ), as they have a location, size and urban morphology that allow a large concentration of residents and tourists simultaneously and are often used as rest areas, facilitating distribution to other areas of the city.

Figure 1. Concepts associated with the spatial-temporal behaviour of tourists and the spatial delimitation of tourism.

Own elaboration
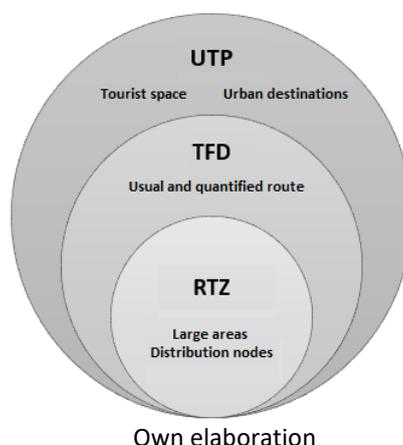
Based on the above, it is possible to establish a direct relationship between the concepts of TFD, RTZ and UTP, their nexus being the spatial-temporal behaviour of tourists in urban destinations. In this sense, it can be determined that the distribution of TFDs and RTZs, together with the study of the location of the tourist offer and accessibility, makes it possible to configure and spatially delimit the UTP of a given destination. In relation to our object of study, the spatial-temporal behaviour of tourists is considered to be the main axis which guides the achievement of the planned objectives, although with a view to future research it is important to consider the distribution of the offer and its accessibility.

Regarding the study of spatial-temporal behaviour, traditionally, existing research has been carried out in urban destinations, based on quantitative methods, with the use of questionnaires as the most widely used technique (Haldrup, 2004; Hartmann, 1988; Markwell & Basche, 1998). There are fewer qualitative studies, such as travel diaries or travellers' blogs and behavioural maps. The latter complement the former, in which tourists draw their route on a map and show where they have been and what they have visited (Molz, 2010). Other research has used the analysis of photographs taken by tourists during their travels through social networks (Mou et al., 2020) since, "photography collaborates in the social construction of the image of a place and conditions not only the choice of this destination, but also the behaviour of visitors in these spaces" (Donaire & Galí, 2011: 292).

The work carried out with Global Positioning Systems (GPS) as a tool for the study of space-time activity is of great interest to this research. These systems make it possible to track the location of tourists at all times and with precision, providing detailed information. Likewise, they facilitate subsequent analysis with Geographic Information Systems (GIS), thus generating specific results about the time spent, the length of stay and the average speed, among others (Shoval & Isaacson, 2007). These results make it possible to map the social use of the tourist space, identify access flows, main transit areas and decongestion zones (Donaire et al., 2015). In relation to this methodology, there are interesting works that use GPS to analyse the movement patterns of tourists in urban destinations such as Jerusalem, Berlin, Paris or Hong Kong (Bauder, 2015; Freytag & Bauder, 2018; McKercher et al., 2012; Xiao-Ting & Bi-Hu, 2012). Their results have shown the pressure on tourism in certain tourism hotspots in these cities.

The research that analysed the spatial-temporal behaviour of tourists in the destinations pursued several objectives. One is to establish patterns of movement of tourists according to their sociodemographic and psychological characteristics or the different ways of organising the trip (length of visit, time of year or loyalty to the destination) (Caldeira & Kastenholz, 2015; Fennel, 1996; Hartmann, 1988; Keul & Küheberger, 1997; Murphy, 1992). Another is finding the methods and techniques to analyse spatial-temporal behaviour (Galí & Donaire, 2006; Caldeira & Kastenholz, 2020; McKercher, 2008; Petterson & Zillinger, 2011; Tchetchik et al, 2009; Thornton et al., 1997). However, other research has linked this object of study to the planning and management of destinations (Bauder, 2020; Trujillo, 2015), as well as to the urban transformations caused by tourism in tourist cities (Bauder, 2015; Freytag & Bauder, 2018; Shoval et al., 2020), an aspect discussed in this article.

III. METHODOLOGY

In order to study the spatial-temporal behaviour of visitors and thus obtain quantitative data, during the high season of 2017 a combined methodology was used of in-

depth interviews with tourist guides (traditional and Free Tours), direct observation and GPS tracking of the movements of tourists on their own, taking the historical centre of Seville as the area of study.

Firstly, a series of in-depth interviews were carried out with 12 tourist guides working in the city of Seville: 5 from the Asociación Unitaria de Informadoreutps Turísticos de Sevilla (AUITS), 4 from the Asociación Profesional de Guías Turísticos de Sevilla (APITS), 1 guide associated with the agency Grupo Edutravel and 2 tourist guides who were working for others. In this first contact, they were interviewed about the routes carried out and the approximate number of tourists attended to, taking into account timetables, duration, start and end of the route and distance, among other issues. The itineraries were mainly carried out in the morning, with a duration of these tours of between 1 hour and 45 minutes, and 2 hours and 45 minutes. The distance covered is between 1.23 and 2.76 km.

Free Tours companies were also present. Ten interviews were held with four companies (Heart of Seville, Free Walking Tour Seville, Visita Sevilla Gratis and Sevilla Free Tours). As with the traditional guides, they were questioned about timetables, duration, start and end of the route and distance. The routes are cut in time and space, two-hour tours, mainly between 10:00 and 13:00 in the morning. The average distance of the routes is 2.30 km. Thus, the total number of visitors who took each of the free tours analysed was counted, resulting in an average of 37 people per day for each of the tours, representing a total of 150 tourists per day and more than 4,400 per month.

In the case of the direct observation technique, a non-probabilistic sampling was used (Cavaillès et al., 2016; Fennell, 1996; Murphy, 1992), with a follow-up of non-guided groups of 4-7 visitors, reaching a total of 52 tourists. This monitoring began at certain access points to the historic centre: Puerta de Jerez, Puente de Isabel II, Jardines de Murillo and Basílica de la Macarena. During the observation of the groups, the routes were noted down, the movement patterns and times used were recorded, as well as the stops made at the distribution nodes or rest areas.

With regard to the GPS tracking, the starting point was the Tourist Office located on Avenida de la Constitución. In this case, the same type of non-probabilistic sampling was also used and non-guided groups of 6-10 visitors participated, providing a final sample of 82 tourists. Each of the groups was given a GPS device to record the route taken, following the methodology of other studies (Bauder, 2015; Freytag & Bauder, 2018; Shoval & Isaacson, 2007; Zhu et al., 2017; Xiao-Ting & Bi-Hu, 2012). Specifically, the tools used were the Qstarz BT-Q1000XT and i-Blue 747A+. After monitoring the routes, the data were analysed and subsequently mapped using a Geographic Information System (GIS).

All the information gathered from the techniques used has provided a set of quantitative data which has made it possible to map the distribution of tourist flows through the public space and the districts of the historic centre of Seville (Annex 1). On the basis of these data, it has been possible to establish three levels of TFD (Table 2). The criterion used to determine these flows has been the frequency of the sample taken to visit the different public spaces and tourist monuments, which has been classified as a percentage. For the high TFD it has been established that these are the routes through the Historical Centre which have been taken by more than 60% of the subjects in the sample. In the case of the medium TFD, the interval is between 20% and 60%, while for the low TFD the percentage is less than 20%.

Table 2. Tourist Flows Destination (TFD) and Tourist Zones correlation

TFD	UTP (70% TFD)
High (> 60%)	Hot
Medium (20%-60%)	Intermediate
Low (<20%)	Cold

Own elaboration

In this way, it is possible to classify the UTP according to the three TFDs (high, medium and low) with a representation of more than 70% for each of them. That is, in the case of hot zones, more than 70% of the flows are high, in the intermediate zones this percentage corresponds to the medium flows and in the cold zones to the low flows.

The reason why this value has been considered is because some authors of commercial marketing (Bort, 2004; Gastalver, 2014; Kelinger & Lee, 2002), establish in their studies, that 70% of the customers go through the commercial establishments in their entirety. Consequently, this study has been readapted by applying it to tourist flows and understanding that, within the limits of tourist areas, of whatever type, these are not completely travelled through, so that there are certain public spaces which are not travelled through or not with the same intensity of flow. In this sense, it has been taken as a criterion that, if more than 70% of a type of TFD is exceeded, this flow will determine the type of tourist area.

This classification of the TFD makes it possible not only to give an overview of the intensity of tourist traffic in a specific destination, but also to delimit and trace the UTP through different types of tourist areas: hot, intermediate and cold.

Following this line, the tourist areas that make up the UTP can therefore be defined on the basis of tourist flows and the contribution of other studies that address similar issues from a merchandising perspective (Masson & Wellhoff, 1991; Puente-Domínguez, 2017; Sukwadi, 2015):

- Hot: tourist area limited between two or more points, where the number of visitors is constantly concentrated over time, so that at least 70% of its TFD are high, so that more than 60% of the tourists arriving at the destination transit through them, and not only in high season but also during most of the year. In these areas, conflicts between the resident population and tourists are more likely to occur, due to the saturation of public space and the concentration of tourist services, as well as because they are the location of the destination's major tourist landmarks and the tourist space with the greatest tradition.
- Intermediate: tourist area limited between two or more points, where the number of visitors is less concentrated than in the hot areas, so that at least 70% of the PTOs are medium, hosting between 20% and 60% of the tourists visiting the destination. Similarly, due to the influx of visitors from the hot zones, new products and services are created and marketed in these areas to meet the growing tourist demand.
- Cold: a tourist area limited between two or more points, where the number of visitors is low, so that at least 70% of its flows are low, with less than 20% of tourists travelling to the destination. They are usually areas attached to hot and intermediate zones which, for reasons of lack of tourist supply, lack of information or accessibility, insufficient appreciation of resources, scarce economic development and a perception of insecurity or deterioration, receive a much lower number of tourists.

IV. RESULTS

Seville has experienced an exponential growth in the number of visitors, which positions it as one of the main urban destinations in Spain. This increase in tourism has gradually expanded the city's public space dedicated to tourist consumption. This is demonstrated by the results obtained, which have provided relevant information not only about this expansion but also about how tourists visiting Seville behave from a spatial and temporal point of view, mainly in relation to the distribution of the different types of TFD and tourist areas in the tourist space corresponding to the UTP, as well as the necessary redistribution of these.

Since the beginning of the 20th century, the Cathedral-Alcázar binomial has been the most visited by tourists and, in second order, the Hospital de la Caridad, the Casa Pilatos and the Palacio de las Dueñas. Later, with the Ibero-American Exhibition of 1929 and the creation of the Plaza de España, the tourist area was extended. Seville witnessed a progressive but slow development of tourism after the renovation and embellishment of the Santa Cruz district and its incorporation into the tourist space. Likewise, from the 1950s onwards and with the growing interest in intangible resources (folklore, religion, crafts), the Macarena and Triana neighbourhood was incorporated, with the Macarena Basilica, Calle Betis and the Plaza del Altozano de Triana (Villar & Fernández-Tabales, 2017).

The holding of the 1992 Universal Exhibition had a definitive impact on the urban morphology of the city of Seville, but with little impact on monumental interest. The tourist area that is being extended is the area around the Guadalquivir River, with the Paseo Colón and the Triana Antigua (Villar & Fernández-Tabales, 2017).

In the 21st century, Seville experienced a second urban-tourist transformation promoted by the General Plan for Urban Planning (2006) and the Seville Strategic Plan (2010). The pedestrianisation projects (Avenida de la Constitución, Calle San Fernando) and the recovery of public spaces (La Alameda, La Encarnación, and La Alfalfa, the area around San Telmo) in the city centre, together with other mobility alternatives (metro, tram and cycle lanes) and avant-garde architecture (Metropol-Parasol space and Torre de Sevilla) generated a high impact on Seville's image, especially those that were carried out in places that are a reference point for the city's identity (Marchena & Hernández, 2016).

Distribution of the TFD

The routes of the traditional and collaborative tourist guides (free tours) made it possible to learn about the mobility of tourists in the city's public space, and to determine the most common routes taken by tourists who hire these services (Figure 2). These routes, as the results show, do not leave the Historical Centre, with Seville being the second largest historical centre in Europe, after Rome.

The starting and ending points of these traditional guided tours are concentrated in the southern part around the main tourist landmarks. This generates a tourist flow of guided routes that are distributed among the Cathedral-Alcázar-Archivo de Indias triangle, the Santa Cruz quarter and the surroundings of the City Hall, Torre del Oro and Plaza Nueva. Logically, there are many other routes and itineraries distributed throughout other areas of the city. However, the fact that the route through the historical centre is the most demanded by the guides, contributes to the concentration of visitors in this area.

Figure 2. Distribution of tourist guide flows
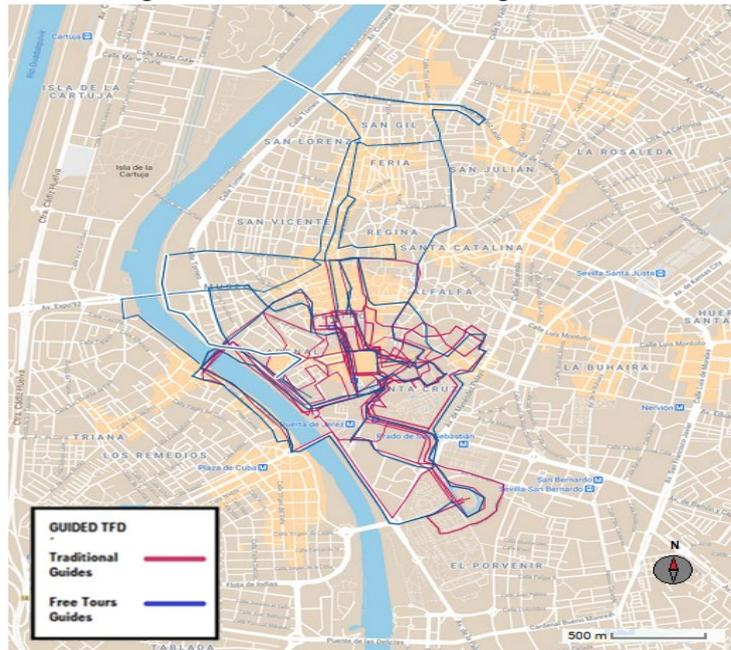
Own elaboration

Several factors, both economic and social, have led to an increase in the number of people who wish to share their knowledge, hobbies and corners of Seville, either informally, part-time or professionally. Thus, free guided tours (Free Tours) become an exchange of experience between visitors and residents.

The Free Tours, although they pass through the main monuments of the city, are inserted in the neighbourhoods, more than in the monuments themselves, which are not in the conventional channels, such as Triana, Museum, Encarnación-Regina, Feria or San Gil. In this way, it can be seen that there are differences between the traditional guides and the Free Tours, as the latter make more extensive tours and visit less frequented places.

With regard to the data obtained through direct observation from the initial points and the GPS tracking point (Figure 3), it has been possible to determine the distribution of the TFD in Seville in a free way that the tourists develop, and how their movements around the city are conditioned by the information collected in tourist offices and other media such as specialised magazines and social networks (TripAdvisor, Guía Viajar, Voyage Tips, etc.), so that they do not hire tourist guides. The choice of these points by the authors was based on their knowledge of the main movements of tourists in the north, south, east and west of the historical centre.

Figure 3. Distribution of flows without tourist guides
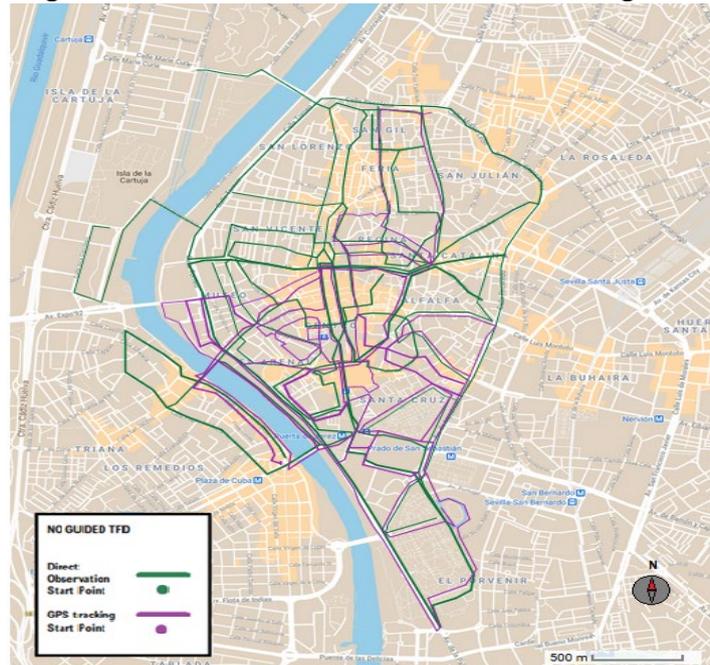
Own elaboration

At the northern point of Macarena, tourists move around the perimeter to the Isla Magica theme park and even to the Seville Tower and shopping centre, as well as skirting the historic centre. At the southern point - Puerta de Jerez, the route goes to the legacy of the 1929 Ibero-American Exhibition, María Luisa Park, as well as the southern ring road, connecting with the eastern point - Jardines de Murillo. In both cases, they move through the World Heritage area and Barrio de Santa Cruz. Finally, the west point - Triana Bridge, allows you to enter the Triana neighbourhood, looking for Triana ceramics and flamenco, as well as walking the Arenal neighbourhood with the Bullring and the Salt Quay, and the Museum neighbourhood.

As can be seen in figure 4, the TFD Altos are concentrated around the main traditional tourist landmarks (Cathedral and Giralda, Real Alcázar, Plaza de España and Puente de Triana). Likewise, the neighbourhoods bring together the majority of the tourist leisure and accommodation establishments. In fact, the area in which the monuments are located reaches a tourist pressure of more than 30% of the houses with tourist purposes (SNI, 2020).

Figure 4. TFD distribution of Seville

Own elaboration

Without a doubt, the pedestrianisation of the Avenida de la Constitución that goes from the Plaza Nueva (where the Town Hall is located), along the Avenida de la Constitución, next to the Cathedral, leading to the Puerta de Jerez and Calle San Fernando, where the old Tobacco Factory, home to the University of Seville, is located, means the integration of the city's most visited monuments. Cathedral and Giralda, as well as the Alcazar of Seville, which will receive more than 2 million visits in 2019, respectively, next to the Plaza de España (ABC, 2019).

Also noteworthy is the flow to Las Setas de la Encarnación (Metropol-Parasol) which incorporates new resources to the city's tourist catalogue, both the building-monument itself with its avant-garde architecture, and the upper viewpoint with other panoramic views of the city, and the Antiquarium, an archaeological crypt. At first, this project had many detractors (residents), but its potential as a major tourist attraction was quickly realised. Today, it is a new icon that identifies Seville, which has allowed the expansion of the accommodation offer, such as commercial rehabilitation, and above all, the hotel industry in the nearby streets. Las Setas has become an architectural work of art due to its spectacular nature and technical complexity, and represents a unique and even "unexpected" element in the historic centre of Seville.

The Metropol-Parasol project, mentioned above, redistributes the high tourist flows through the northern part of the city in the tourist circuits, and is also extended by nightlife and creative activities, essentially in the Alameda de Hércules and the streets Feria and San Luis.

Around these high TFDs are the intermediate TFDs. In the city, the palace houses (Casa Pilatos, Palacio de las Dueñas, Museo de Bellas Artes, etc.) and baroque churches (El Salvador, Magdalena, Santa María La Blanca, etc.) scattered around the historical centre, are another

point of interest for visitors, and these are scattered around various neighbourhoods. The rich historical heritage of these buildings is best represented by the church of La Macarena, whose basilica receives around 900,000 visits a year (2019). Some of the proposals of Plan 8 of the Seville City Council are to promote the Mudejar churches, as this will allow the flow of tourists to be deconcentrated and extended to the whole northern area of the Historical Centre of the capital, proposing new routes such as the Encarnación, San Marcos, San Luis, Macarena and Hospital de las Cinco Llagas axis.

The TFD Bajos, which usually coincide with places of transit, from where tourists stay (hotels or tourist accommodation) to other resources or areas of the city. However, since 2015 it has spread to the Arenal, San Bartolomé, Encarnación-Regina, Feria, with residential tourism pressure between 20-30%. Some spaces, outside the traditional commercial channels, are Torre Sevilla or Isla Mágica, located in the grounds of the 1992 Universal Exhibition.

There are also some islands in the historic centre that are not under tourist pressure, such as the neighbourhoods of Santa Catalina, San Vicente, San Julián and San Lorenzo.

These results are comparable with the study by Donaire & Galí (2008) and show that behaviour seems to be conditioned, giving rise to streets or areas that are very busy and others that are practically deserted, in tourist terms.

Spatial delineation of the UTP

The UTP in Seville has been expanding not only because of the increase in the number of visitors, but also because of a series of urban transformations that have increasingly allocated public spaces for tourist use. If before the 1992 Universal Exhibition, the UTP in the city of Seville was mainly located in the southern part of the historic centre, the transformations of the 21st century have extended it to the north, Las Setas and Alameda, considered the "Soho sevillano", and to the east, on the border of Triana.

Figure 5 shows the spatial delimitation of the UTP in Seville, where the three zones (hot, intermediate and cold) appear, as well as the RTZ.

Figure 5. UTP in Seville
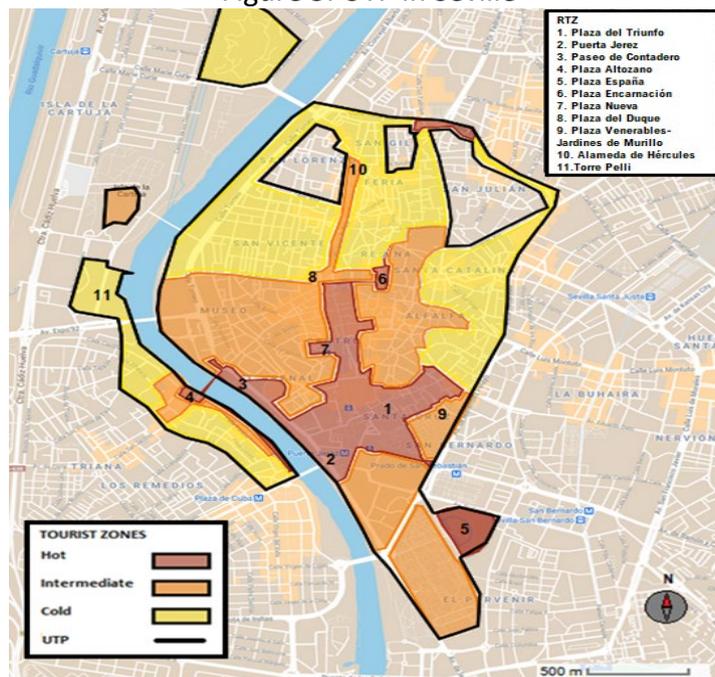
Own elaboration

The hot area concentrates most of the tourist services (accommodation, restaurants, shops, leisure) that complement its tourist offer. The UNESCO heritage area, together with the Santa Cruz neighbourhood, the Torre del Oro, the Tobacco Factory, Plaza España, the Maestranza, the Triana Bridge, "Las Setas", and the Basilica de la Macarena are some of its tangible resources. It should be noted that these last resources mark the trend of growth and redistribution of tourism in Seville. Likewise, tourist service companies have also been created in the vicinity of these resources. For this reason, it is the area that generates most conflict between residents and tourists, due to the saturation of public space and the concentration of tourist services, as well as being the location of the main tourist landmarks of the destination and the tourist area with the longest tradition. As Jover-Báez & Berraquero-Díaz (2020) argue, this issue has given rise to a mobilisation of part of the population to denounce touristification as a process of physical and symbolic appropriation of this space. To this must be added the problem of tourist dwellings, since in the Barrio de Santa Cruz, 22.7% of dwellings are tourist dwellings, while in the area around the Cathedral, Archivo de Indias and Alcázar, the percentage rises to 40.1% (ISN, 2020).

The intermediate zone contributes to the expansion of the UTP, because it is around it where new resources have been created, or where existing ones have increased their real estate value. In relation to this, major urbanisation processes have been carried out, such as the pedestrianisation of certain areas (Alameda de Hércules, Alfalfa-Plaza del Salvador or San Jacinto) which has contributed to the expansion of the tourist area and has benefited the opening of tourist businesses (Marchena & Hernández, 2016).

Finally, the cold zone corresponds to the most recent incorporation of public space into the UTP in Seville. In the case of the northern part of the city, the urban renovation work carried out in recent decades, the wide range of restaurants on offer and the consolidation of the Macarena and Setas as tourist products, with the Alameda as its nexus, have led to the

incorporation of this area into Seville's tourist area. In addition, 11.3% of the homes around Setas are tourist homes (ISN, 2020).

With regard to the Triana area, it is a neighbourhood with its own idiosyncrasies which has grown considerably in recent years from the point of view of tourism. Although the majority of its tourist products are located in the hot and intermediate areas, the cold area has a wide range of accommodation, in which there has been a notable increase in the number of tourist homes. Currently, in the historical part of Triana, next to the Alfonso XIII canal, 6.2% of the houses are tourist ones (ISN, 2020).

Finally, it is worth mentioning the area surrounding the Andalusian Centre of Contemporary Art (CAAC), whose number of visitors has increased, reaching 264,705 visitors in 2019, 23% more than the previous year (ABC, 2019), making it the gateway for tourists to the Cartuja area and establishing synergies with CaixaFórum and Torre Sevilla which can contribute to decentralising demand.

In short, the study and distribution of the tourist areas produces interesting results for the managers of the destination when it comes to knowing those spaces in which it is necessary to carry out tourist planning with the aim of expanding the TFD from the hot areas to the cold ones, thus avoiding the high massification of the former.

V. CONCLUSIONS

The study of the urban destination through the spatial-temporal behaviour of tourists provides the academic world and, above all, local and regional authorities with an insight into where visitors have actually been. The results have shown that the initial hypothesis is fulfilled and that tourist flows shape the tourist space.

The work has demonstrated the analysis of tourist flows in Seville, either through the routes followed by tourists with traditional guides and Free Tours, or through the routes without groups. In relation to this, the results have shown interesting differences between the guided groups, as it has been demonstrated that the Free Tours follow more extensive and less travelled routes than the traditional ones.

Time, space and activities are considered three important domains of the tourism experience, making spatio-temporal behaviour a valuable visualisation and quantification tool for shaping UTP.

Following the theory of Shoval et al. (2020) outlined above, the UTP of Seville is the place of practical concentration for tourists visiting the city, where they carry out their mobility and where the tourist offer is located. At the same time, it also contains the main elements that make up the tourist image that the city projects to the outside world.

As far as ethical issues are concerned, direct observation as a method of following participants without knowing that they are being observed is questionable but has the advantage that it does not alter tourist behaviour. The combination of accurate digital monitoring, based on high resolution over a long period of time, together with in-depth interviews with tour guides, has allowed for a better understanding of the tourist's experience in the destination. In particular, the proliferation of tourist tracking technologies is enabling such behaviours to be increasingly accurate and will allow good public management of urban destinations and an improved tourist experience.

As recent studies (Donaire et al., 2020; East et al., 2017; Jeong et al., 2018) have shown, the results derived from the analysis of tourism flows and the factors that influence their distribution allow for improved destination management, in terms of avoiding future overcrowding of specific locations, designing and promoting alternative routes, quality tourism products and services.

In the future, the authors consider it interesting to analyse other components of spatio-temporal behaviour such as emotional factors, i.e. feelings prior to trip choice (Huang et al., 2020). Likewise, for future research on the configuration of the tourist space, we believe it is very important to study not only demand behaviour but also other issues related to the destination such as the distribution of the tourist offer in the destination itself, one of the main factors that influence spatio-temporal behaviour (Lew & McKercher, 2006). It would also be interesting to analyse, through a Spatial Syntax methodology, how the urban structure, i.e. the morphological characteristics of Seville's streets (dimensions, urban hierarchy, pedestrianisation, etc.) influences the tourist space.

These tourist flows go beyond their spatial dimension, as they provide information on behavioural patterns and travellers' experiences. We are therefore faced with a valuable tool whose knowledge allows Destination Management and Marketing Organisations (DMO) to establish Strategic Visitor Flows (SVF) strategies that regulate the way in which visitors access, cross and exploit public spaces and tourist services on offer (Baggio & Scaglione, 2018). In general, this improves their experience and results in a more sustainable tourism.

Knowing the new redistribution of tourist demand is key to:

- To decentralise the tourist/resident pressure of the THZ, while guaranteeing a shared use of public spaces without jeopardizing either the residents' quality of life or how they perceive tourism.
- To open start-ups linked to tourism, where complementary activities and sustainable mobility services are fostered by a new profile of young and qualified entrepreneurs that, attract local talent.
- To add value to other heritage sites and unique buildings.
- To promote local economic development and improve communications infrastructure in other areas of the city.

Undoubtedly, the administration's commitment to urban renewal in recent decades and to a connected and sustainable city are playing a key role in the new conception of a shared public space, with the right balance between business and day-to-day life. This research, by offering a series of proposals for the administration, can contribute to this. In addition, it provides a different vision focused on demand and not on supply. It also shows how new spaces are being incorporated into the tourist city (UTP growth) as a consequence of urban transformations, the appearance of Free Tours and the channels for channelling tourist information (TripAdvisor, Lonely Planet, Guía Viajar, Voyage Tips, etc.).

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CONTRIBUTION:

Author 1: Methodology, Data Analysis, Resources, Writing - Original Draft, Writing - Review & Editing, Visualization.
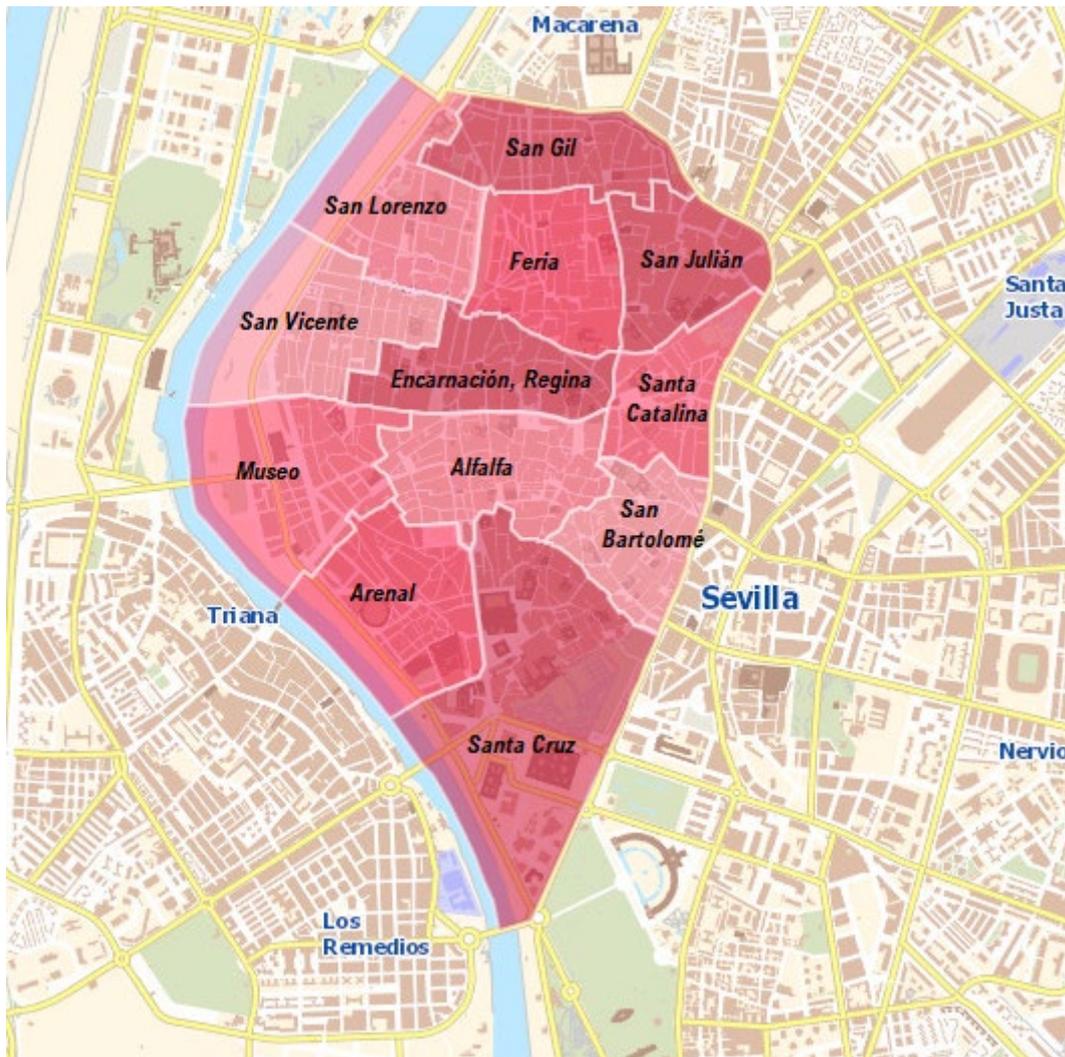
Author 2: Methodology, Formal Analysis, Data Curation. Supervision, Funding Acquisition.

Author 3: Conceptualization, Original conception of the work, Supervision.

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Annex 1: Neighbourhoods of the Seville Old Town District

Source: Own elaboration based on the Sevilla City Hall (2020b)