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Modeling tourist itineraries in heritage cities. Routes around the Old District of Girona

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Resumen: Los turistas no tienen un comportamiento aleatorio en las ciudades monumentales, sino que se guían consciente o inconscientemente por unos itinerarios socialmente construidos. Este artículo estudia la configuración de estos itinerarios en una ciudad monumental (Girona), a partir de la metodología de la observación directa (siguiendo los turistas y recopilando toda la información relativa a sus visitas) y el cuestionario convencional al final de la visita. Igualmente, establece cuáles son los factores sociodemográficos, ambientales e informativos que explican este comportamiento. La utilización simultánea del método de la observación y el cuestionario se ha mostrado como una técnica útil de análisis del comportamiento de los turistas.

Palabras clave: Ciudades monumentales; Comportamiento turístico; Seguimiento de turistas; Observación directa; Itinerarios urbanos

Abstract: Tourists do not follow random behavior in heritage cities, but they are consciously or unconsciously guided by socially constructed itineraries. This article studies the shaping of these itineraries in a heritage city (Girona), using the direct observation methodology during the visit (following the tourists from a prudent distance and gathering all the information about their visits) and the conventional questionnaire at the end of the visit. It also establishes which the sociodemographic, environmental and informative factors are that explain this behavior. The simultaneous use of the observation method and a questionnaire was found to be a useful technique for analyzing tourists' behavior and the factors that explain this behavior.

Keywords: Heritage cities; Tourist's behavior; Tracking tourists; Direct observation; Urban routes

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Introduction

Many tourist cities have created urban routes that, in some way, *domesticate* the gaze of tourists. From the Teresa of Avila route to the "*Madrid de los Austrias",* from following the footsteps of the Beatles in Liverpool to the Ulysses of James Joyce in Dublin, or the Picasso walking tour of Barcelona to the alternative route of the Catacombs of Paris, these urban routes filter the catalogue of city resources and offer some of them, which are "consumed" in a more or less homogenous way. However, the "free" tourist experiences create urban itineraries that respond to some hidden laws which guide the relationship between the tourist and the area visited. In fact, any form of urban tourism is, in reality, a process of construction (material or symbolic) of a certain route that selects some streets and some spaces and, as a result of doing so, rejects others. Therefore, the urban labyrinth is reduced to a form of *tourist path,* that is the setting where tourists' experiences take place.

The transformation of contemporary tourism in the changeover from a Fordism structure to a post-modernist conception (Edensor, 2001; Pretes, 1995; Urry, 1990) also calls for an adaptation in the way that the social sciences analyze the tourist phenomenon. In this sense, some authors, such as Soja (1989) vindicate the central role of the place in the modern conception of society. The concept of tourist space has radically changed in this new context. Tourist places are no longer just the stages on which tourist practices take place, but they are also social constructions.

One of the authors who has had the most influence of the new conception of space is Sack (1992) who proposes three conceptions of space that are completely interrelated: the material space (the objective conditions of the space from a physical and a human point of view), the mental space (the individual, subjective appreciation that each person makes of a certain space) and the social space (the reading that the various social and symbolic dynamics have on the territory). Sack (1992) insists on the idea that these three conceptions are closely related. For example, it is clear that the mental image a person has of his hometown is highly conditioned by the social construction of the spaces and by its subjective characteristics

This three-way conception of space is particularly useful for analyzing the tourist space. In essence, the tourist space has a physical-material component, however "the space is more than simply physical reality, and comprises a duality of identities; it is a both a product presented for consumption, and a site where many different practices occur" (McCabe & Stokoe, 2004:603). For example, tourists' behavior in the space can be interpreted as the result of two dialectics: the relationship between the individual (mental construction) and the territory (physical space) and, at the same time, the relationship between the individual (mental construction) and socially constructed guidelines.

Sudies on the social construction of the tourist space have been based on four main areas. An initial group of studies conceptualized the idea of forming mental images of places and their effects on the choice of a certain destination and, even on later effective behavior. In his classic study on the tourist space, McCannell (1989) considered that the creation of stereotypical images is so important that it even conditions the physical structure of the place, as it creates a front in which tourists and residents interact and a back that is far removed from the voyeuristic gaze of tourists. Studies on the social construction of the destinations are very important as they are based on the fact that the tourist experience starts at the origin of pre-tourism and, therefore, the tourist practices in the place are mediatized by *a priori* conceptions (Awaritefe, 2004; Hughes, 2006; Seddighi & Theocharous, 2002).

A second line of research attributes tourist spaces with a heavy symbolic liminality load. One of the first authors to highlight the transgressor content of the tourist space was Shields (1988) in his well-known study on the *Places on the margin*. Shields (1988) demonstrated that the condition of the liminality space of Brighton is present in all the phases of the tourist evolution of this territory. This is Aramberri's (1983) central thesis. Tourist places are, in fact,

the projection of social transgressions of the space of origin in a far away space. In some way, tourist spaces are the Carnivalesque places in which the societies of origin project their own moral or social limitations (Selanniemi, 2003; Cohen, 1992).

A third line of research is the analysis of the shaping of the tourist space. In other words, the way the tourists use space and the tourist facilities transforms the spatial logic of a destination. The analyses move between the classical empirical studies of analysis of the use of land (Wu & Cai, 2006) or the locating of the tourist facilities (Urtasun & Gutiérrez, 2006) and the conceptual proposals on the general characteristics of tourist spaces (McManus, 2001).

The fourth study area has unfortunately not been dealt with as much. The effective behavior of tourists in the space, in other words, the way in which these tourists consume the place, has not been given preferential attention in studies on the social construction of tourist spaces. Understanding the effective behavior of tourists in the place can contribute to greater academic knowledge about the relationship between space and material, space and social aspects, space and mental aspects, as all behavior is, in short, the intersection of these three features. In addition, as Shoval & Isaacson (2007) state, knowledge about tourists' behavior can contribute to policy-making, planning and management. As these authors say, "for example, if the spatial and temporal behavior of tourists is better understood, it would be possible to tailor transport systems, adjust the way in which attractions are run, and perfect marketing strategies, all in line with their actual needs" (Shoval & Isaacson, 2007:142).

Studies on the behavior of tourists have basically been based on behavior declared in interviews. March and Woodside (2005) compared effective behavior with the previous planning in Edward Island. Ching-Fu Chen & Dungchun Tsai (2007) investigated how destination image affects behavioral intentions and evaluative factors. Waitt (2000) analyzed the role of tourists' perception of authenticity at The Rocks in Sydney and their behavior. Zillinger (2007) studied the factors that influence the behavior of German card-tourists in Sweden. The authors consider that this behavior depends on external factors (the characteristics of the places, the points of departure, the distances, etc.) but also on internal ones. Zillinger (2007) shows that there is a certain common logic in tourist behavior which is based on criteria such as experience, length of stay or previous information.

Most of the studies do not take into account effective behavior, but declared behavior. This method always runs the risk that there is a difference between the two, in other words, that tourists declare a very different behavior than that which they really did through lack of knowledge or through the "social pressure" of the questionnaire. As Brown (2007:364) says "asking tourist what they think may not be a good way of getting at the judgments that can be seen in actual activity. One corrective here is the use of observation". The direct observation method enables the effective behavior of tourists to be collected with complete reliability in the territory and to relate this behavior to the external or individual factors of the tourist. The direct observation method has been used by diverse authors with rather successful results. Galí & Donaire (2006), for example, in their research on tourists' behavior in heritage cities, or Hartmann (1988) studying the behavior of American and Canadian tourists to the city of Munich, or Keul & Küheberger (1997) observing tourists to Salzburg (Austria), or one of the most innovative and recent proposals by Shoval & Isaacson (2007), that proposes the use of new digital technologies to collect data on spatial and temporal tourist activities.

The aim of this article is to define the effective behavior of tourists in a heritage city using direct observation and to determine the factors that explain the differences in tourists' behavior. In this way, the methodological proposal combines the advantages of direct observation with the systematic collecting of the information obtained from the questionnaire. The combined use of the two forms of analysis is seen to be a very powerful tool for analyzing tourists' behavior (what) and the factors that explain this behavior (why).

Urban itineraries of the Old District of Girona

Study Methods

The study site is Girona, a city of approximately 100,000 inhabitants with a rich cultural heritage. Girona is the archetype of the compact medieval city, with a very high density of monuments and a series of universal signs related to its historic condition (a labyrinthine urban layout, the constant presence of stone, the city walls, the religious elements, etc.). According to data provided by the town council, in 2005, Girona received more than 276,000 national and international tourists. Girona is considered an archetypal city of the places representing Spanish culture, which explains its selection as the setting for our study.

The sample was taken from market research into the number of tourists to the city, in a approximate way, based on diverse sources: the Tourist Information Office, the local museums, the qualified observations, the tickets sold to closed spaces and the central booking office. This enabled the authors to design a sample of 532 people. The margin of error is 4%, with a level of confidence of 95.5% (the average and two sigmas) and the maximum indetermination (p=q=0.5). The sample is random, stratified by months. The percentage of registers per month of the year were obtained from the previously mentioned sources (TIO, museums, places to which a ticket is required, central booking office, etc.), with two periods of maximum intensity (spring and summer) and two leaner periods (autumn and winter). The seasonal effect is a little more acute in Girona that in many other monumental cities as a significant percentage of its tourists come from the coastal strip (mainly the Costa Brava), with a basic concentration in the hotter months. The second criterion of stratification taken into account was the entrance to the city. From the direct observation, the authors calculated that almost all tourists enter the Old District by crossing the bridges (*Sant Feliu* Bridge and the *Pont de Pedra* Bridge). The first bridge concentrates approximately 75% of the real entrances and the *Pont de Pedra*, the other 25%.

The information collecting combines direct observation of the behavior of tourists with the conventional questionnaire at the end of the visit. In practical terms, the direct observation method consists of following subjects from a prudent distance, recording the pattern of their visit over time and space. For the direct observation the Old Quarter has been modeled in a graph made up of edges and sights. The 158 edges are the sections of street between one intersection and another. For each edge information about the time of entrance, the time of exit (and therefore the time and the speed of the visit), the attitude and the photographed elements were gathered. The 28 nodes are the main attractions of the Old Quarter, identified from a systematic study of tourist guides of the city. For each node, data were also gathered about the entrance time, the exit time, the attitudes and the photographed elements.

When the observed tourist ended his or her visit and abandoned the Old District of the city, they were given a questionnaire based on three types of information: conventional sociodemographic data, characteristics of the visit and general perception of the city and its heritage elements. Information was also collected about the environmental characteristics in which the visit took place (level of congestion of the city, the weather, the season and so on) and the kind of information used (guidebooks, brochures, tour-leaders or tour guides and so on). This enabled the sociodemographic, environmental and informative factors that condition the tourist experience to be valued.

The questionnaire was based on questionnaire models that are accepted in the scientific area, which are an adapted version of the tourist destination kind of questionnaire (SERVQUAL). The most widely accepted methodological referent is the one proposed by Echtner & Ritchie (1993), which combines various models; the open questionnaire, the Likert scale and semantic differentiation. According to the authors, the studies on tourism destinations should examine the functional image of the space (the equipments, the services, the prices ...) and also the psychological image (quality, atmosphere, sensations ...). Equally, the research should be based both on the definition of the specific local attributes

and on the general image. So the model of questionnaire developed contributes to: the perception (functional and psychological image) of the tourists on the city and the image of the attractions (the sights).

Results

The results of the study show that despite the fact that the tourists enter the Old District of the city with a not very well defined image; their behavior seems to be conditioned by some fairly precise rules. Therefore, the mapping of the itineraries shows some streets that are densely transited and some areas that, in tourist terms, are deserted. One can also verify a relative homogeneity in the time taken to pass through the edges (the sections of street between one intersection and another) which permits the authors to differentiate the slow areas of the city from the fast ones. This is the paradox: despite the fact that the image of the tourists is made up by a few unconnected elements (in the best of the cases), their behavior responds to a logic that seems to have been agreed on. In other words, the tourists' behavior follows the logic of the tourist consumption of medieval cities: the preeminence of the cathedral, the value of the promenade, the research of photo points, etc.

A second interpretation enabled some specific differences in the tourists' routes to be detected. Starting with a morphological analysis of the routes, based on a qualitative study of the 532 routes, four basic categories were identified:

- The basic route. This only focuses the tourist gaze on the Cathedral area and ignores the rest of the heritage. Three sub groups of itineraries of this first model were distinguished. Model 1a includes the itineraries that start from the southern access to the Old District of the city (*Pont de Pedra*); model 1b starts from the north access (*Sant Feliu* Bridge) and tourists do not go to the commercial area in the Old District; and model 1c starts from the north access (*Sant Feliu* Bridge), and the cathedral as well as the commercial area are visited.
- The commercial itinerary. This illustrates the value of the services on the Old District, as it includes all the routes that do not come into contact with the heritage areas and is focused on the offer of services. There are also two sub categories: the 2a model for the commercial routes that came in through the south entrance and the 2b model for the routes that were started by entering through the north entrance.
- The complex route. This itinerary combines access to the Cathedral area with an interest in one or more monumental areas. Again, three categories of this model have been distinguished. Model 3a contains the routes starting from the southern access to the Old District of the city; model 3b starts from the north access without coming into contact with the commercial area; and model 3c begins from the north access and the commercial area are visited.
- Finally, the city wall itinerary. This is characterized by the partial or full use of the City Walls Walk; with two possible variants: 4a (entrance from the city's southern entrance) and 4b (entrance from the northern entry to the city).

For each of these models of itinerary and their sub models, the authors have studied the characteristics of the visit; in other words, the different variables that define the route of each kind of itinerary detected (number of visitable points, number of sights visited, complete time of the visit, time spent at the sights and length of the route). The results can be seen in table 1 that shows the behavior of the different reference variables in the ten resulting models and compares them with the average values.

The study shows that an average tourist dedicates an hour and a half to visit the Old District, of which half an hour is dedicated to the different points and an hour to walking along the streets; the average length is more than two kilometers and permits three points to be visited, although tourists could have visited eleven. A quick glance at the table 1 enables the appreciable differences between each itinerary to be seen, which can be summarized in the following points:

1. There is a close relationship between all the variables. In other words, the itineraries that correspond to short

Itinerary		Visitable sights	Sights visited	*Visit time*	Time at the sights	Length (meters)
Basic	**1a**	8.57	1.96	1hr	20min 31sec	1.747
	1b	9.89	2.49	1hr	20min 39sec	1.783
	1c	10.44	2.46	1hr 23min	22min 24sec	1.819
Commercial	**2a**	2.31	0.44	53min	3min	1.152
	2b	3.5	0.9	1hr	2min 20sec	1.428
Complex	**3a**	12.05	3.5	1hr	29min 16sec	2.406
	3b	13.22	4.65	1hr	41min 6sec	2.444
	3c	12.89	3.92	1hr 46min	35min 43sec	2.335
City Walls	**4a**	12.42	4.75	2hr	37min 24sec	3.283
	4b	14.71	4.94	1hr 52min	44min 6sec	3.276
	General	10.84	3.18	1hr 33min	28min 1sec	2.157

Table 1. Characteristic of the visit in diverse itineraries

2. routes coincide with the visit to fewest monuments and with a shorter stay time, and the other way round. Therefore, they are factors that are highly related to each other.
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3. There is a close relationship between all the variables. In other words, the itineraries that correspond to short routes coincide with the visit to fewest monuments and with a shorter stay time, and the other way round. Therefore, they are factors that are highly related to each other.
4. The differences between the sub groups of the same itinerary are not at all relevant. On the whole, the metric values of all the sub groups of a same itinerary (for example 3a, 3b and 3c) have very few differences between each other, despite the fact that their morphology may vary appreciably.
5. We can establish a kind of grading with regard to the results from the visit models with lower values to those with the highest indicators. The commercial itinerary is the model that has the lowest values, followed by the basic itinerary and the complex one; the city walls itinerary is the one with the highest overall values.
6. The values of the detours (and Pearson's dispersion coefficient) are very low, although they have not been included in the table. This fact allows the authors to affirm that the groups and sub groups created from their morphology have a high internal coherence and behave as if they were clusters.

Type of city routes

The basic route

This first model includes all the routes that are exclusively centered on a visit to the cathedral site as the only element of tourist interest. In this itinerary model there are no secondary flows, therefore, the spatial concentration is very much greater, the tourist city is reduced much more, and the flow of tourists is channeled by a very reduced number of streets, with the resulting tourist pressure that this represents. It is a model of route that is characterized by the spatial concentration and the reduction of the number of features visited.

This first model represented 33.3% of all the cases, a very significant percentage. In fact, this data corroborates that for a large number of tourists, the city's heritage is

reduced to one of its pieces, the one they consider to be most representative. Therefore, there is a kind of synecdoche in that the tourist takes the part for the whole and assimilates the cathedral as the Old District of the city.

Three sub groups of itineraries of this first model have been identified, in other words, three possible variants. Model 1a includes the itineraries that start from the southern access to the Old District of the city (*Pont de Pedra*); which represent 8.6% of the total. Model 1b starts from the north access (*Sant Feliu* Bridge) and tourists access the cathedral area directly without coming into contact with the commercial area; this represents 7% of the itineraries. Model 1c (17.7% of the total) starts from the north access (*Sant Feliu* Bridge), and the cathedral as well as the commercial area are visited.

The commercial itinerary

The commercial itinerary is the most unique model of the city routes, a *rara avis* in tourists' behavior. The main factor that differentiates this model is that the tourists do not access any of the city's heritage areas, not even Girona's main sight -the cathedral. Therefore, the visit has a purely commercial or service related component. It is rather unusual that in a city like Girona there is a commercial itinerary; as in most monumental cities the services area is separate from the area of the routes. On the whole, Old Districts (especially the area of the visit) do not have tourist services. Girona, on the contrary, is characterized because the offer of services (shops, restaurants, financial services, leisure time facilities, etc.) is found in the center of the tourist experience.

The commercial model offers a very short visit in terms of distance (one kilometer) and of time (one hour). The old city is positively valued but only for the commercial or recreational activity, meaning that it is deprived of its cultural function.

Users of this model may be tourists who have previously done the Old District and who are making a second visit, this time attracted by the services, or tourists who do the commercial route as the main object of their visit.

As the work was only centered on the old city, the authors do not have information about the connection of the commercial circuits of this area and their relationship with the other main commercial corridors of the city, however, they are probably strongly linked, in the way that in this case, the Old City is not visited as a unit in itself but as a setting (although unusual) connected to a commercial circuit and to more far-reaching services.

The model is a very infrequent one. Overall, it represents 10.5% of all the visits. Again, two sub models have been considered: 2a, entrance from the south access (*Pont de Pedra* Bridge) which accounts for 6.8% of all the cases and 64.3% of the routes of the second model; and 2b, entrance from the north access (*Sant Feliu* Bridge) accounting for 3.8% of all the cases and 35.7% of the second model.

The complex route

The complex itinerary (the third model) is clearly the most habitual one, as it represents practically half the cases studied (45.9%): almost one out of every two routes corresponds to this type. The element that makes this model singular is that the tourists access to two or more heritage areas of the city, so that it could be considered an extension of model 1. In this case, tourists have a richer and more complex vision of the city's heritage-monumental offer.

The complex itinerary is characterized by its diversity, as each area makes up a different model of route. Despite this, there are two elements that mark the route of the itinerary in a very significant way: in the first place, the entrance bridge (*Sant Feliu* or *Pont de Pedra*) and in second place, the access to the cathedral area, which continues to be the point of reference. The authors distinguished three sub models. The first one (3a) joins all the complex routes that start from the south access (*Pont de Pedra*); it is the least frequent of the three, as it represents 10.5% of all the cases. The sub model 3b starts from the north access (*Sant Feliu* Bridge) and the tourist does not have contact with the commercial area, meaning that the visit is concentrated in the heritage area; it accounts for 11.3% of the set of routes. Finally, sub model 3c is the most common one (24.1% of all the

routes) and combines the visit to the heritage area with a visit to the commercial area, coming in from the north entrance (*Sant Feliu* Bridge).

The main indicators of the visit (points visited, time of the route, distance, etc.) have greater than average values. In addition to being the most frequent itinerary, it is also the most habitual among tourist guides in the locality. In this case, the route is almost a kilometer longer than the average one and the time of the visit goes up to almost two hours, on average, This model is also the one with the greatest internal detour, which is highly conditioned by the number and kind of complementary areas visited.

The city walls itinerary

The city walls itinerary is different from the three previous models due to the partial or total use of the city's medieval walls. This element of the city acts in a twofold way, on the one hand it is another sight to be seen in the city, one of the monuments that makes up the heritage offer of the Old District; on the other hand, the city walls have become a route, an urban itinerary since their rehabilitation.

Access to the city walls appreciably changes people's perception of the city. First, it offers a joint vision of the Old District. Along the stretches of the city walls, tourists can enjoy panoramic views that show them the compacting and the joint value of the medieval city, which cannot be made out so clearly from the internal routes. Secondly, the city walls offer a more far-reaching understanding of the points of the city that can be seen on the skyline. Thirdly, the city walls mean that tourists who are following them do a marked route, which differentiates it from the conventional routes in which tourists have to constantly choose between one street and another. Finally, the city walls are also a connector between the diverse areas of the Old District, so that tourists increase their accessibility to the diverse areas of the medieval city.

The double effect of the city walls (they are, at the same time, the viewpoint of the city and one of its features, and they improve the accessibility to the various spaces) explains the fact that in this model, the indicators of heritage consumption have their highest values of the set of routes. Specifically, the time of the visit is more than two hours and the route is more than three kilometers, in other words, double the average. Willingness to visit the city walls greatly increases among tourists lodging in Girona.

The city walls itinerary is the one with the lowest percentage of use, 10.3%, similar to the commercial route. Once again, two sub models have been differentiated apart from the access to the city. Sub model 4a (access from the *Pont de Pedra*) accounts for 4.5% of the total and 43.6% of the city walls itinerary. Sub model 4b (access from *Sant Feliu* Bridge) represents 5.8% of the total and 56.4% of this kind of itinerary.

Factors that condition the choice of itineraries

In the previous part, the behavior of the four main itineraries and the ten sub groups was described. The detailed study of this taxonomy facilitates to realize that assignation to one or another category is conditioned by a series of factors, some of an internal nature (the characteristics of the tourists) and others of an external nature (what they call the environmental conditions of the visit). In this part, researchers aim to define precisely this: the relationship that can be set up between each factor and each itinerary model. The interrogative that they hope to reveal is precisely this: which factor(s) explain the distribution of the visit in the urban itineraries of Girona?

Studies on the factors that condition the model of visit have notably proliferated in recent years. Some authors have stated the importance of socio-demographic characteristics, such as Formica and Uysal (1998) who mention three variables in their study in the Spoleto Festival (age, income and marital status) or Master and Prideaux (2000) who emphasize the relevance of age, gender and occupation, together with previous experience.

Some authors, such as Bieger & Laesser (2002) or Richards (2002) have shown that socio-demographic factors (age, gender, income, occupation, etc.) are combined with

Factors	%	Chi-Square Value	Significance Level	Degrees of freedom
GENDER		5.8	0.123	3
Female	44.9			
Male	55.1			
AGE		35.6	0.002	15
Up to 18	0.4			
19-30	23.7			
31-40	19.9			
41-50	22.4			
51-60	17.6			
60+	16.1			
MODALITY OF VISIT		23.2	0.001	6
Alone	5.8			
Couple	23.7			
Group	70.5			
LOCATIONS		31.4	0.002	12
Girona city	9.1			
Costa Brava	45.6			
Another tourist destination	15.9			
Excursion	24.2			
Tour	5.3			
CONGESTION		26.2	0.01	12
Very high	10.2			
High	26.9			
Normal	39.1			
Low	20.1			
Very low	3.8			
WEATHER		21.4	0.044	12
Heavy rain	0.8			
Light rain	8.3			
Cloudy	28.8			
Partly cloudy	25.8			
Sunny	36.5			
SEASON		22.6	0.007	9
Spring	26.5			
Summer	45.1			
Autumn	16			
Winter	12.4			
TOUR GUIDE		26.2	0.000	3
Yes	23.9			
No	76.1			
GUIDEBOOK		10.3	0.016	3
Yes	17.5			
No	82.5			

Table 2. Factors structure.

factors related to the characteristics of the trip (destination, duration of the trip, number of people in the group, type of trip, etc.). Kim (1998) considers that the behavior of

cultural tourists is conditioned by four factors: gender, the degree of individualism or collectivism, geographic origin and the perceived insecurity. Ryan & Huyton (2000) also analyzed the groups that are formed in the interest for aboriginal culture in Northern Territory, Australia; the results show that socio-demographic factors, such as age, gender, origin and occupation are highly relevant, but that aspects linked to the characteristics of the trip, such as the duration and the use of tour operators, are also related. This relevance of general factors of the trip and the individual characteristics of the tourists is particularly evident in the study by Kerstetter, Confer and Graeffe (2001) on the interest of American tourists in heritage.

Based on the reference studies, the authors considered three groups of factors and analyzed their influence on the assignation of the four models of itineraries (see table 2). The first group is made up of individual factors that can vary between one tourist and another, (the gender, age, origin and number of companions). The second group is made up of external factors, that do not directly control the individual and that could be considered "environmental" factors (congestion, the weather and the season of the year). Finally, the authors considered it was a good idea to integrate the factors related to the information as it is an essential variable on the experience of the tourists (guided trip and guidebook).

Personal Factors

Most of the studies on the behavior of tourists have shown the relevance of personal factors, social and demographic variables. Intuitively, the authors could consider that the age, gender, cultural level or origins are variables that alter the form in which tourists relate to the heritage.

The relationship between the models of itineraries of the Old District of Girona and personal factors show that most of the factors have a direct influence. There is a statistically significant relationship between age, the number of companions and origin, although there is no relationship with gender. This verification is very relevant from the point of view of management, as it enables the authors to sense the behavior of tourists from their personal characteristics. Of the four variables studied, the one that shows a greatest influence on the model of itinerary is the model of visit (alone, as a couple or in a group).

Despite the fact that some studies on the gaze of tourists to heritage have shown the differences of gender and have verified the existence of a feminine perspective, the study has not facilitated a statistical relationship between this variable and the model of itinerary to be established. The value of chi-square is very high, at 5.8 (with a significance of 0.123 and three degrees of freedom), in other words the gender perspective does not modify the assignation to an itinerary, although there is a greater predisposition to the city walls route by males.

Age is a relevant factor in assigning an itinerary. Differentiated behaviors can be found in each age group. Younger tourists show a more significant percentage of the commercial model; adult tourists have a greater disposition to carry out the complex routes and the city walls; finally, people over 50, and particularly over 60, opted for the basic route, while clearly rejecting the city walls and the commercial itinerary options. The authors are aware that age is a factor that acts in a double way: the physical conditions (which explain for example the low participation of elderly people in the city walls route) and the social and psychological conditions (with a greater predisposition to services by younger tourists). This relationship is statistically significant, as the chi-square is 35.6, with a very low significance (0.002) for 15 degrees of freedom.

One of the aspects that condition the type of itinerary is, without a doubt, the modality of visit. The behavior of tourists when they travel alone or as a couple tends to be more alternative, in other words, they frequent far more often the itineraries that have a higher exceptionality factor (either the commercial or the city walls route). In contrast, it is quite clear that tourists that come to the city in a group have a more standard behavior, in fact, the basic and complex itineraries stand out, which are, at the same time, the most usual ones for groups accompanied by a local guide. The chi-square, in this case, is 23.2 with a very low significance of 0.001 (in fact the lowest among the personal factors) and with 6 degrees of freedom.

Finally, the last factor analyzed was the relationship between accommodation and the modality of itinerary, that are again related with a significance of 0.002 (for a degree of freedom of 12) and a chi-square of 31.4.

In the specific case of Girona, as in other monumental cities, four kinds of types of tourists have been found according to origin or accommodation: tourists that visit the city as a main motivation and spend the night in the city (9.07%), tourists who make a tour of various monumental cities (5.29%), day trippers (24.20%) and two more categories, that are explained by the proximity of the city to the coastal tourist areas, which are tourists lodging on the Costa Brava (20 km from Girona) and visit the city for the day (45.56%), and tourists who are staying in other tourist localities (Barcelona, El Maresme Coast and the Costa Dorada, and inland) and visit the city of Girona for the day (15.88%).

Despite the fact that the proportion of itineraries varies according to the place of origin, the complex itinerary behaves as a universal model. All the models of tourists (from the day trippers to the tourists on the Costa Brava) have a similar proportion of the complex itinerary. In other words, despite the apparent differences in motivation, availability or interest between the diverse origins, in practice, the complex routes that combine the visit to the cathe-

dral area with one or more complementary areas are clearly predominant. The differences are seen in the other routes.

The commercial model is clearly conditioned by origin. This route stands out significantly among the tourists lodged in Girona and the day-trippers. In this case, the discriminating factor is the recurrence: the previous visits. Tourists staying in Girona may have visited the city in the morning or on previous days and the day-trippers on a previous visit; therefore their route around the city is limited to the commercial and services area. As one would expect, the other three kinds of tourists (tourists on the Costa Brava, those from other tourist localities and touring tourists) show a very low percentage of commercial routes.

The basic model is, in some ways, inverse to the commercial one. The percentages are higher among the tourists from the Costa Brava and tourists staying in other destinations, while it is significantly low among the tourist lodging in Girona, and in day-trippers. Finally, in the city walls itinerary the importance of information and knowledge explain that it is particularly relevant in Girona tourists. While these tourists only represent 10% of the total, almost one out of every four tourists who do the city walls route is staying in the city.

Environmental factors

The environmental factors explain the form in which the external agents condition tourists' behavior. It could be said that these factors influence all tourists despite their diverse social or demographic conditions: they are "universal" factors. Once again, their relevance on the management of the city is clear. If it is found that the pressure of tourists or the atmospheric conditions affect the type of visit, one could imagine *a priori* which the areas with greatest pressure would be in accordance with the factors observed.

The most relevant environmental factor is congestion. This circumstance backs the thesis that tourists interact between themselves, in such a way that an excessive (or too low) number of tourists at a place with heritage influences the tourist "densities", in other words, how the tourists are situated in the space. In fact, it is a good idea to highlight the fact that the relationship between congestion and itinerary is reciprocal. On the one hand, high levels of congestion can lead to seeking alternative routes, but on the other hand, some routes such as the commercial one favor (and even stimulate) some congestion. The other two environmental factors refer to weather conditions and the season of the year. In the first case, there is a direct relationship, in other words, the presence of clouds or a very sunny day alters how the visit is made. The season of the year affects indirectly, as it conditions other factors such as the origin, duration of the visit, degree of congestion, etc.

The relationship between congestion and the itinerary modality is a very close relationship, as the chi-square is 26.2, with a significance of 0.01 for 12 degrees of freedom. High congestion acts in two apparently contradictory ways. In the first place, in situations in which the number of tourists is high, it tends to increase the proportion of the more elaborate models, which act as alternative routes (city walls and above all complex); but at the same time, the commercial itinerary favors situations of very high congestion. In other words, while the city walls and complex itineraries can be considered a cause of high congestion (as they act as alterative routes), in the commercial itinerary, congestion is a cause of the very model of the route (short and slow).

In situations of low or very low congestion, the most relevant is the basic one. This relationship can be explained by the combination of two factors. In the first place, in situations with a low "tourist density" the speed of the visit is reduced and the need for alternative routes is decreased. In second place, lower congestion takes place in periods of the year when the percentage of tourists in groups increases, which is the model with the greatest predisposition for a simple route.

Traditionally, a relevance that should be commented on has been given to the weather. The study shows that there is no statistical correlation between congestion and the weather. This implies that the city of Girona is no longer the refuge destination for people on the coast (the Costa Bra-

va or the Maresme coast or the Costa Dorada) on days that are not good beach weather days. However, there is a relationship between weather and the modality of route. In other words, the weather does not determine the choice of whether to visit the city or not, but it does determine the way in which it is visited. In this case, the chi-square is 21.4 with a relatively high significance (0.044) with 12 degrees of freedom.

Extreme conditions do not favor the complex and above all the city walls route. By looking at the latter, one can see that there were no city walls itinerary registered with rain (moderate or heavy) and the percentage was significantly reduced on a sunny day. The same behavior can be detected on the complex route, although not in such an extreme way. This shows that adverse environmental conditions do no facilitate the more elaborate models of route (which involve more visiting time, longer routes and a greater consumption of "exteriors"). Therefore, the basic and commercial itineraries show greater disposition in extreme conditions (rain or sun).

The third environmental factor is the season of the year, which has a chi-square of 22.6, with a significance of 0.007 and 9 degrees of freedom. Summer is clearly the period with a greater influx of tourists, coinciding with a greater disposition for the commercial and city walls routes. It could be said that the probability of carrying out these routes in the other seasons of the year is very low. In warm seasons, the percentage of basic routes increases notably, especially in spring, as a result of the greater presence of organized groups (at least in relative terms). Finally, the authors would like to point out that the complex itinerary follows standard behavior and does not vary its proportions according to the different seasons.

Information factors

The last group of factors took into account were the aspects related to information (guided visits and guidebooks), as they are an essential variable in the tourists' experience. Informative features are used by tourists as a support on their visits, in fact they guide their decisions, condition their gaze, define their routes, and even act on the interpretation they make of places (Lérivray, 1975). Therefore, they are a central instrument for mapping local itineraries. So, it is not unexpected to find that the relationship between the models of itineraries of the Old District of Girona ad the informative variables should be highly significant.

Thus, the first informative factor analyzed, which is the relationship between the kind of itinerary and whether or not they are accompanied by a tourist guide, shows the greatest significance (0.000) for a degree of freedom of 3 and a chi-square of 26.2.

From the results, it is seen that if a visit is made with a local guide or accompanied, the percentage of basic and complex itineraries increases. In fact, they are the two models of route that are most common for guided visits, as they enable contact with the area of the cathedral (the city's sight *par excellence)* and/or some other heritage areas, depending on the time the tourist has. The local guide is usually a level of preparation of the visit. They act in a double sense: on the one hand, they limit the capacity of free choice, as they guide the tourist's gaze; and on the other hand, they offer more information to the tourist and, therefore, more elements for judging.

The final factor studied was the relationship between the use of guidebooks and the model of itinerary. As in the preceding cases, there was also a significant relationship. In this case with a significance of 0.016, for a degree of freedom of 3 and a chi-square of 10.3.

Guidebooks are a very important support on free routes as they intervene in the tourist's decision-making process, at the same time as being a strategy of local tourist management, in which the promoting bodies determine what should be seem and define the routes to be taken. In short, they act as a witness to what should be seen. Therefore, as can be seen in table 10, the city walls itinerary which is the most qualitative one, is linked to the use of guidebooks. In contrast, the simpler and less cultural itinerary, the commercial one, is a model of route that is usually made without the support of informative material.

Conclusions

The way in which tourists get around the Old District is not unanimous. Based on the study of the morphology of the routes, the authors have identified four models of itinerary, which correspond to four different ways of consumption of the monumental city:

- The basic model is characterized because the only heritage visit model that is done is the area of the cathedral. It represents a third of the total of routes and is predominant among tourists who are staying on the Catalan coast (Costa Brava, Maresme, Costa Dorada, etc.).
- The commercial model represents 10% of the urban routes. It is different from the rest of the models because the tourist does not access any heritage area, but moves among the main shopping and services streets.
- The complex model is the most frequent one, as it represents 46% of all the visits. It is characterized by the visit to two or more heritage areas, in other words, the area of the cathedral and a complementary area.
- Finally, the city walls model that represents 10% of the routes and is defined by the total or partial use of the city walls walk.

The study has also made possible to analyze the factors that explain the predisposition to opt for one model of route or for another. Similar studies on the factors that condition the behavior of tourists have accentuated conventional personal aspects (age, gender, cultural level, etc.). In the case of Girona, the routes are highly conditioned by the combination of very diverse elements that often act in an opposing sense: personal factors, environmental factors and informative factors

The personal factors, unlike the environmental ones, have an individual character, in other words, they vary between tourists. These factors have a very relevant influence on the model of itinerary, especially the type of visit. Tourists who travel in group tend to frequent the simple and complex itinerary; however individuals opt for the city walls and the commercial routes. Age also conditions the choice of itinerary, as young people opt more for the commercial model, adults for the complex and city walls route and the elderly go for the basic model. In the same way, the origin also explains the predisposition to certain behavior, such as the preponderance of the city walls route among tourists staying in the city or the basic route among tourists staying on the coast. Gender, on the other hand, does not condition the choice of one or another itinerary.

Environmental factors act in a similar way for all tourists, independently of their socio-demographic characteristics. The main environmental factor is congestion, so that in cases of high congestion, tourists increase the resource of alternative itineraries (complex and city walls); this also backs the thesis that heritage consumption in Girona is conditioned by a determined threshold or capacity which, if exceeded, has negative repercussions on the perception and behavior of tourists. The choice of one route or another is also influenced by the season of the year and the weather. In the case of the weather, it was seen that in extreme conditions (great heat or rain), there was a greater disposition to use the commercial and basic routes while in moderate conditions the other two predominate (city walls and complex).

Finally, the two factors with greatest significance are the means of information, or the guide or guidebook, which influence itineraries with more cultural content. In fact, the option of being accompanied by a guide affects the basic and complex itineraries which are the most habitual ones for groups, as has been explained. The use of guidebooks is determining in the city walls route, probably the most complicated one to do without the support of the information. This shows that information is a main factor in shaping the itinerary of cultural centers.

These results were obtained with the combination of the direct observation method and a questionnaire. First of all, the effective behavior of tourists to the Old District was studied. In this way, a precise outline of tourists' effective routes was obtained, the specific way in which tourists "consume" (materially and symbolically) the space. The morphological analysis of the routes enables a type of itinerary to be established based on the main criteria of

observation (sights visited, place of entry and so on). At the same time, the questionnaire made at the end of the visit enables the effective behavior of each tourist "observed" to be matched to a series of factors (sociodemographic, environmental and informative) that can be analyzed with quantitative tools. Beyond the specific results for the city being studied, this methodology brings together the main advantages of qualitative and quantitative methods and enables the false dichotomy between the information observed and the information declared (and processed statistically) to be overcome. The use of the new technologies (Shoval and Isaacson, 2007) can decrease the degree of laboriousness of direct observation.

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