Urban morphologies of films
on the Spanish mediterranean coast

Las morfologías urbanas de las películas
en la costa mediterránea española

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Abstract

The aim of this article is to establish a relationship between the urban morphologies of cities on the Spanish Mediterranean coast and the quantitative and qualitative representation of their urban characteristics in cinema. Given the common historical patterns in Mediterranean cities, such as historic centres and their subsequent growth, these coastal spaces have been chosen as a first

sample to apply the methodology. First, a literature review has been carried out to establish the state of the art that links the filmed urban scenes and the morphologies that are represented. Second, the empirical methods are based on the urban analysis of the morphologies appearing in more than fifty movies, which have been evaluated and categorised according to variables such as architectural elements, urban morphologies, compactness and location, based on the taxonomy of Zárate Martín (1991). Urban landscape criteria have also been considered, with an emphasis on physical and morphological spatial characteristics such as landscape landmarks or public spaces. In addition, they have been related to filmic categories such as genre and the origin of productions. To this end, Geographic Information Systems and urban documentation, such as town planning regulations, have been used to locate and characterise the film clips analysed.

Key words: cinema; urban morphologies; landscape; filmic narrative.

Resumen

El objetivo del presente artículo es establecer una relación entre las morfologías urbanas de las ciudades del arco mediterráneo español (AME) y su representación cuantitativa y cualitativa en el cine de sus características urbanas. Dada la apreciación de pautas históricas comunes en espacios, como los centros históricos y sus posteriores crecimientos, se ha apostado por estos espacios litorales. En ese sentido, se plantea una metodología de revisión bibliográfica para establecer el estado del arte que relaciona las escenas urbanas cinematográficas y las morfologías que son representadas. Para ello, se ha apoyado este estudio en el análisis urbanístico de las morfologías filmadas en varias decenas de películas, que han sido evaluadas y categorizadas a partir de variables como sus elementos arquitectónicos, morfologías, compacidad y emplazamiento, basadas en la taxonomía de Zárate Martín (1991). También se han considerado criterios paisajísticos urbanos que hacen hincapié en las características físicas y morfológicas espaciales como los hitos paisajísticos o los espacios públicos. Además, se han vinculado con elementos cinematográficos como el género o el origen de las producciones. Para ello, se han empleado Sistemas de Información Geográfica y documentación urbana, como la normativa urbanística, para localizar y caracterizar los clips analizados.

Palabras clave: cine; morfologías urbanas; paisaje; relato fílmico.

1 Introduction

In recent decades, the social sciences and humanities have been increasingly interested in the relationship between cinema and the city. In the English-speaking literature, this subject has received greater attention and has been approached from a diverse range of perspectives. These include essays on *film and urban space* (Barber, 2006), on the link between *film, city and modernity* (Pomerance, 2004), on *film and architecture* (Lamster, 2000), on *film, tourism and urban branding* (Donald & Gammack, 2007) and on *cinematic mapping* (Conley, 2007).

The history of architecture belongs to the history of art in its own right. It does not only contemplate *singular architecture,* which is the result of a complex process in which the architect leaves his of her creative mark, regardless of whether the work fulfils a social function or uses sophisticated technological devices. However, cinema does not show what cities are like, but is essentially concerned with filming buildings and urban landscapes with which to create an ephemeral urban space, a scenario evocative of an appropriate moment for the outcome of a specific dramatic situation (Ponce, 2011). Frequently, the camera does not even show the whole building, but only focuses on substantial parts of it and selectively glides along its façades, in order to briefly define the setting where the human relations that support the plot take place. In Europe, cinema has always been an urban activity; hence the urban landscape has to appear on screen (Sorlin, 1991). Indeed, cinema became the main medium of visual memory and the traces of this memory became part of the urban space. Filmmakers went further and began to focus on urban ensembles, their evolution, the exile of their inhabitants and the construction of suburbs within the city itself: spaces for social submission and dissident opposition (Camarero, 2013).

The modern city, resulting from the industrial revolution, imprinted this programme in its urban fabric through urban planning, giving it a textual, legible character through the uses and functions attributed to the differentiated urban spaces. Different communicative devices for the expression of urban thought contributed to this objective, from architecture and urban planning to literature, film and visual arts. Cinema participated in the process of urban transformation by engaging the filmic device to explore the incessant change of cities and making it its privileged object of representation (Lorente, 2016).

These intense relationships between the transformation of the city and the evolution of the filmic imaginary can be systematised in time and space, through the geolocation of film frames and their subsequent urban characterisation. This article addresses these correlations based on an empirical approach that links the exhaustive study of film locations using the bank of

georeferenced images in Spanish cities carried out under the umbrella of the FACES[1] project with a characterisation of the urban form of the cities on the Spanish Mediterranean coast, one of the areas undergoing the greatest land transformation in Europe in recent decades (Pérez, 2009; Martí & Ponce, 2011). This correlation is presented as a new methodological contribution that provides a guide to future interpretative readings of the duality between cinema and city based on the visualisation of the urban landscape and its urban morphology. The concept of urban morphology is understood as the forms of growth that have given rise to the fabric of our present cities (Capel, 2002; Solà-Morales, 1993; Zárate, 1991).

2 Objectives

Cinema, like literature or photography, has the capacity to reflect and record the transformations of a city throughout its history. Furthermore, it is able to actively participate in the construction of its imaginary, thus influencing our way of perceiving, remembering and imagining cities. Cinema reflects and builds. It is a mirror and a tool for designing stories, urban typologies and socio-historical contexts. Thus, as film is a tool of great discursive value, it constitutes a medium that offers opportunities to read the history in a space (Schlögel, 2003). The underlying question is whether it is possible to identify relationship patterns between the filmic use of cities' images and their urban form. The aim is to identify the urban landscape that constructs the filmic narrative and can provide knowledge about the cross-relationship between how film interprets the city and its link with the urban form. This article is a first approach to establishing a methodology to correlate film images and urban morphologies, through a rigorous process of interpretation of different films and the classification of filmed spaces.

2.1 General objectives

This research proposes a methodological procedure based on the relational analysis of the incidence of urban morphology (its landscapes and imaginaries) in film locations. Thus, the article examines the main urban morphologies filmed from a diachronic perspective and the greater or lesser relationship between urban morphology and filmic narrative. The general objectives focus on establishing possible correlations between the form of the city and film categories, first presenting a state of the art (overcoming discursive issues) and focusing on a mixed methodology (quantitative and qualitative). This methodology is based on empirical

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recognition, supported by cartographic tools that allow us to test whether there is a link between cinema and urban form, due to interpretations and proposals derived from the morphological identification of cities. This empirical approach has the following general objectives:

- To identify connections between the urban imaginary constructed by cinema and the analytical/formal study of the city through a specific geographical area, in this case the cities of the Spanish Mediterranean coast.

- To recognise correlations between urban form (morphologies, landscape, landmarks, age, etc.) and cinematographic characteristics (genres, plots, productions, locations, imaginaries) and frame them within the state of the art of cinema and the city.

- To establish a mixed methodology that combines film analysis, endorsed by cartographic verification in order to identify, classify, propose and generate reflection and proposals related to the role of urban morphology in cinema. In the light of the outcomes and justifications, we propose the application of the methodology in the field of spatial analysis and urban imaginaries.

These objectives seek to answer interrelational questions regarding issues that affect the overlapping of cinema and the city, based on a methodology that focuses on the role of morphology and the urban landscape. The generic correlations aim to answer research questions such as: Can links be established between filmic imaginaries and the formal characteristics of cities? What impact does the visualisation of an urban form have on film genres? How relevant is the form of the city and its landscape to issues such as location selection? Is there a link between film-induced tourism in the cities analysed that helps to generate an imaginary?

2.2 Specific objectives

As stated in the introduction, this article is based on the work developed in the FACES project, and its specific objectives are linked to the data obtained in the exhaustive film analysis carried out. Thus, after establishing the general objectives and given the data, a set of specific objectives have been determined that will allow us to link the challenge of correlating the morphology of the city with its filmic imaginary. The specific objectives are precisely the questions we ask ourselves after watching the films and the location of the film frames: What impact do the urban morphologies of the Spanish Mediterranean coast have on the film? And on its film genre and its production? Which urban landmarks are repeated in the film? How often?

Based on this series of concrete questions, we have formulated the following specific objectives, which will be addressed in the results of the article:

- To identify the impact of a diverse range of urban morphologies in cinema based on a geographical area of study, in this case thirty-four cities of the Spanish Mediterranean coast.
- To analyse the visual impact of the fifty-one selected films set on the Spanish Mediterranean coast and to establish an initial relationship between this cinematographic sample, the urban landmarks and the urban landscape.
- To identify the links established between the national and international identification of the films analysed and the urban spaces of the cities.
- To recognise relationship patterns between film genres and urban typologies.
- To systematise the methodology built in the research so it may be replicated in other cities/regions.

The specific objectives allow us to link the intention of the research to establish a rigorous, reproducible and scalable methodology with a specific application to a case study and a series of previously selected films.

3 State of the art

In this research, the specificity of the binomial cinema and city focuses on a discourse that operates through four main axes that intersect throughout the methodological and empirical study. These four axes are: *the city in the cinema*; *the film's reiteration in the creation of urban imaginaries*; *the urban categorisation (morphologies, landscape and landmarks)*; and *the case study: cities of the Spanish Mediterranean coast*.

3.1 The city represented in cinema

Since the first urban scenes filmed by the Lumière brothers, the city has been a protagonist or setting for an incalculable number of films. It is well known that the first public paying cinema projection took place on 28 December 1895 in the *Salon Indien* at the Grand Café in Paris, where the Lumière brothers screened their first film, *La sortie de l'usine Lumière à Lyon*. Cinema was officially born in the city, in front of an audience of its inhabitants, and the first film in history showed a typical scene of urban life, the outflow of workers from a factory. For the first time, the potential audience of the newly born art form appeared on the screen as the protagonist: the urban proletariat (Antoniazzi, 2018).

At the end of the eighteenth century, the Industrial Revolution began to change the course of urban history, initially in England and later, during the nineteenth century, all over the world (Zárate, 2012; Tallon, 2013). The Industrial Revolution led cities to a state of visible decay and

they were forced to undertake an accelerated urbanisation that produced mutations in urban structures motivated by economic and demographic changes. These new structures affected the interior of the historical neighbourhoods and involved the replacement of buildings in some parts of the city with renovated constructions with a greater efficiency and capacity, always through interventions, the extension of the urban grid "and through the demolition of the weakest (…) or historic structures, such as walled defences, which were already completely outdated" (Sica, 1981).

The townscape is defined by the type of buildings, the urban fabric and the volume of construction. Its characteristics respond to environmental, economic, social, political and technological factors that change over time, with a prevalence of historicist approaches that relate architectural style, urban form and function to the phases of urban development, including studies seeking to differentiate morphological parts within the city (Zárate, 2012).In this article, the analyses are established in relation to eight urban morphologies defined in *subsection 3.3*: historical centre, grid extension, suburban area, garden city, high-rise development, slum, industrial park and commercial park.

Cities and buildings are essential for film narrative. The main events of films take place in these spaces: they work as a backdrop and contextualise events, sometimes becoming their main characters. For Juhani Pallasmaa (2011), film and architecture are artistic disciplines that share a common goal: "to articulate lived spaces". Cinema projects and uses places to tell stories, to convey ideas, many of them related to urban space. Indeed, people who inhabit cities also have a high power to attract filmmakers, who work in cities, from a scientific perspective. They conceive them as living organisms that are in a continuous process of change, through dizzying transformations and contexts, constructions and reconstructions, modifications and reinventions (García & Paves, 2014). Furthermore, cinema is also a representation of an artwork, as it has the capacity to capture not only the real component of a city, but also a subjective one, which marks the personal perception of filmmakers. Undoubtedly, analytical practice is as much about description as it is about interpretation (Casetti & Di Chio, 2009). For more than a century, cinema has reflected the physiognomy of cities, documenting changes that the urban environment has undergone, sometimes traumatic such as the destruction caused by wars. Through film, we can only achieve a partial and fragmentary view of a city that varies according to places and attributes of the city selected by filmmakers (Antoniazzi, 2018).

Urban images conveyed to us by filmmakers have conditioned our perception of the city. They have modelled and continue to shape the imaginary of entire generations. We may believe that a street in a certain city somewhere on the planet exists because we have seen it on the screen, generating an induced attraction that can lead to a tourist dynamic (Camarero, 2013). Indeed, sometimes *singular architecture* gives personality to sites and configures them as human spaces. In other words, it becomes a specific urban landscape, which is positioned in order to configure imaginaries and brands (*place branding*), giving rise to cultural and leisure initiatives and activities, which transcend their filmic nature (García, 2021). In the geographical and economic context described by Harvey & Smith (2005), film is increasingly used as a marketing resource to promote cities and induce the public to visit them, thanks to its ability to confer a market identity in a neoliberal and globalised context, where interest in sites of production has shifted to specialised service centres. Several studies show that through films, it is possible to build or enhance the image of a city, improving its positioning in the tourism market (Busby & Klug 2001; Kim & Richardson 2003; Riley et al., 1998; Tooke & Baker, 1996).

3.2 Film's reiteration in the creation of urban imaginaries

Audiovisual fiction has the capacity to evoke, anticipate, configure and transmit imaginaries linked to a geographical space and to convert it into a setting for stories and characters with which the spectator can identify and find appealing. Films and television series become devices that can induce a certain feeling and behaviour. They generate expectations that contribute to shaping the affective and emotional perception of a location. Moreover, they constitute an effective strategic mechanism for brand communication through generic *advertainment* (Pintado & Sánchez, 2012), *branded content* or *branded entertainment* (Aguilera & Baños, 2016).

It should be noted that very few studies have been conducted on the filmic image of Spanish cities (particularly Barcelona and Madrid) compared to other cities such as Paris, London, Berlin and New York, which feature in all main studies on cinema and the city (De Miguel, 2022). The scarcity of research on this subject is surprising if we consider the relevance of Madrid and Barcelona in the history of Spanish cinema and the large number of films that have been shot there. It is even more astonishing if we consider that in recent years there has been an explosion of studies on cinema and the city (López, 2009; Gámir, 2015; Camarero, 2013; García & Paves, 2014; Antoniazzi, 2018; Romero, 2020; Mejón, 2020; Pizza, 2022). According to Marina Waisman (1995), urban space defines the form of the city, *the urban order, the division of land, the character of routes —shape, rhythm, direction— and the horizontal and vertical*

dimension. The stereotypes of Spanish cities are often represented, as most of their scenes are filmed in historical quarters, with other urban morphologies being ignored. However, it is worth mentioning that in this article the empirical data (number of clips, films and time) reveal a prevalence of the grid extension over the historical centre, considering that in Spain (which has had a secular urban culture since its origins) the current urban space is barely half a century old.

The representation of the urban phenomenon and its relationship with cinema is not justified in itself. This relationship is useful for understanding and explaining the influence of urban morphologies and their diversity as a form of spatial organisation resulting from different social, cultural, technological, economic and geographical contexts. It should also help us to assess the influence of the natural environment, and above all, to verify the persistence over time of a series of characteristics that reinforce their own condition as substantial elements of the urban form (Vinuesa & Vidal, 1991). Therefore, the fact that the urban morphology most frequently used for different film genres is the grid extension seems to respond to the diversity and modernity of these spaces and their capacity to connect with the diegesis and plots of films. In Spain, the urban grid extension plans were envisioned by Cerdà, who conceived a plan for Barcelona, and Castro, who designed one for Madrid, both of which were approved in 1860. Other plans followed them, such as those for San Sebastián (1864) and Bilbao (1876). In fact, developed according to a specific law (the Law of Extensions and populations approved in 1864)— grid extensions were the urban planning response to the housing problem in Spanish cities during the nineteenth century. They directly responded to the need for expansion in cities that had experienced high rates of demographic growth since the end of the nineteenth century without substantial changes in the residential area. Thus, the modern city emerged, with new services such as wide streets (up to fifty metres wide), sewage systems, water supply, etc. Unlike the old town, it was a foreseen and planned city (Gámir, 2015).

The urban fabric of our cities is made up of areas of landscapes and predominant land uses, sometimes well-defined and differentiated from a functional and social point of view. Together, they form a true mosaic and constitute what is called urban structure: the centre, residential areas, industrial zones, *rururban* and *periurban* strips (Zárate, 2012). The greater or lesser homogeneity depends on the historical dates when they were formed, given that there was a lower level of segregation of functions in the past, in times of the concentrated city, than today, with the diffuse and fragmented city model, particularly in the Mediterranean. The tourist model, sometimes considered more systematic than exemplary because of its excesses, has prevailed on the Spanish Mediterranean coast since the 1960s. The model has been shaping and reinforcing its

peculiar collective imaginary through the great symbolic and dissemination capacity of cinema. The developmentalism of the later stages of the Franco regime, the Swedish women syndrome, bikinis, the Rodríguez figure (husbands who stayed at home working during the summer while their families went to the coast) and the Spanish *macho*, mass tourism, Fordist consumption and property speculation on the coast are the socio-cultural references. They are the most recurrent clichés on which the image and the traditional perception of *made in Spain* tourism are based (Martínez-Puche *et al.*, 2020).

In any case, cinema has projected an imaginary through which the spectator, in his or her dual condition of observer and citizen, has experienced and rehearsed the diversity of possible readings of the complexity of modern and post-industrial cities (Lorente, 2015). In the case of the cities analysed in this article, the traditional vectors of spatial occupation that exceeded the limits of the compact city (such as industrial development and tourist occupation) were responsible for the discontinuous extension of economic, social and urban uses, and therefore of urban morphologies, across vast rural and coastal spaces along the Mediterranean. In fact, on the Spanish Mediterranean coast, the forms produced by both of these phenomena preceded, in time and space, those generated by the new functions that now constitute the driving forces of urban expansion fragmented by residential, commercial and leisure uses (Ponce, 2006).

3.3 The categorisation of the city: Morphologies, landscapes, and landmarks

Film studies generally examine the relevance that the image of cities has had in cinema and therefore in the collective and popular imaginary. However, this image is the product of the city (Lefebvre, 1974), which over time has constructed and shaped the image it projects. Thus, the relationship between city and cinema goes beyond the image. Thanks to these urban landscapes, it is possible to relate the value that films confer to the diverse fabrics of the city and link filmic singularities with the characteristics of urban morphologies. Urban morphology is defined by using criteria that are generally formal, but which include the growth processes of the cities. We consider the urban plan, grid and buildings as formal aspects of the city, and processes of urbanisation and land division as aspects of differentiation confirming the city.

The growth of cities over time results in the overlapping of a diversity of urban landscapes. The lines of the urban space, its materiality, its rhythm and composition consolidate the image of the parts of the city. Formally differentiating these parts is not a trivial task. Several authors have conducted historical and formal lines of research to define their differences in order to classify the "morphologies" of the city based on different criteria. The study of urban morphologies is

based on differentiating the urban elements that together build the form of the city: plots of land, types of buildings, blocks, streets, open spaces, etc. Much of this research focuses on identifying these urban forms based on specific characteristics shared by the urban fabrics of a sample of cities developed in different historical moments.

In order to propose a coherent classification of urban morphologies in accordance with the sample selected, we can refer to some of the main authors that have been working in Spain on this taxonomic process since the 1990s. First, Manuel de Solà-Morales (1993) classified the city's urban fabrics according not only to their form but especially to their process of development. Solà-Morales distinguishes three basic moments in the construction of the city: Allotment (A), Urbanisation (U) and Building (B). In a very graphic way, he constructed a taxonomy in which, depending on the order and the overlapping of these three processes, one or another morphology was formed. Therefore, the following forms of urban growth appeared: grid extension (A+U+B), suburban area (U), undeveloped area (A+B), garden city (UA+B), slum (B), high-rise development (AUB). Based on this structuralist characterisation, some of the parameters for identifying the filmed urban spaces have been determined. This approach generally shows the birth of morphology, the first transformation from rural land to urban land in relation to its historical and socio-economic context. The process of urbanisation seeks to provide administrative, economic and social services to the whole territory, erasing in some cities the differentiation between countryside and the city. However, the origin of the morphology, which defines its characterisation on the basis of these forms of growth, is modified over time (Vinuesa & Vidal, 1991). According to Solà-Morales, this foundational urban moment establishes the characteristics that define the basic parts of the city and are the source of a first classification proposal.

Indeed, the classification of urban morphology based on its basic elements has also been developed by authors studying urban form. Panerai *et al.* (1980a; 1980b) identifies morphology thanks to the basic elements of urban fabrics (streets, plots, blocks, squares, etc.). His analysis particularly focuses on the block, its initial aggregation and its dissolution into isolated buildings. The form of the different cities is distinguished according to changes in the relationship between the parts of their fabrics, which include a socio-political vision of the construction of the urban form of European cities. If we add economic factors and political decisions based on an ultra-liberal ideological position against public intervention in spatial planning (Burriel, 2009), it is easier to understand why there are municipalities whose demographic and socio-economic crises have been latent for decades. In fact, leaving a neighbourhood or an excluded area unconnected

due to unplanned growth affects all social groups. Sometimes, when land is zoned and reserved for mass consumption (a shopping centre or a hypermarket) local commerce suffers and, therefore, the possibility of setting up businesses is also excluded. They are *machines for living* as claimed by Le Corbusier (Dioni, 2021). Panerai *et al.* propose that the logic of the urban form derives from the relationship between architecture and the common spaces of the city. In fact, Panerai's identification of urban morphologies, less taxonomic than the one proposed by Solà-Morales, focuses on a careful distinction between the built and the non-built space, emphasising the capacity of the type of block to define the fabric through the social, economic, political and architectural history that led to its development. Panerai defines the elements of urban analysis by identifying continuous and discontinuous expansions, and by referring to the building typology and the plot as the original element of the urban fabric.

In addition to the fabrics, it is worth mentioning the approach to the urban landscape through the camera lens, the perspective of the human being in the city. Panerai et al. (1980a) devote a chapter to the urban landscape and pictorial analysis as a process for capturing urban reality. They acknowledge the valuable proposal of Lynch (1960), who constructs a simple classification of elements that can help in the reading of the urban landscape from a visual perspective. Lynch differentiates between *paths*, *nodes*, *districts*, *edges* and *landmarks*. *Paths* allow the identification of itineraries that often coincide with historical routes. The *nodes*, understood as strategic points, meeting points for several of the routes identified in the first point, are points of reference: places. The *district* is defined by a common identified area, which may or may not be homogeneous, but is determined as a common whole. The *edges* precisely define the boundaries of the districts and their relationships. Finally, the *landmarks* are unique elements, clearly identifiable in relation to the rest of the urban landscape, which help to mark strategic and particular points —nodes. By reading the city through these simple elements, it is possible to understand the space from a sequential perspective. In fact, Panerai *et al.* (1980a) and Cullen (1961) use the plan as a pictorial visual element. Through sequential drawings, Cullen overlaps the information of the urban landscape by incorporating the landmarks from different perspectives.

In this sense, although from a more geographical and holistic viewpoint, Zárate (1991) emphasises precisely the difficulty of finding a universal methodology for categorising the different morphologies and recognises that there is an abundance of studies that address questions related to the social production of space and its perception by combining physical and social aspects, quantitative and qualitative methods that seek to describe or formulate partial

theories about the morphology of the city. These approaches to urban morphology provide a visual and substantial image of the city. According to the author, the form of the city is a social product that is highly influenced by its geographical environment. The form of the city is determined by its location, which in turn is conditioned by its natural surroundings and always shows the traces of its historical layout. The enclave is a determining factor in the form of the city and for Zárate the *plan*, identified as the set of built and free surfaces, reflects the importance of time. Recognising the *plan*, he proposes an initial classification of this factor (grid, circular, irregular, etc.). In addition to the *plan* defined by its geometric characteristics, the author identifies the relevance of the urban construction in the form of an *urban fabric*, and differentiates mainly between compact building, building in blocks and the open grid, looking for the formal relationship between the aggregations of the building. The next determining factor of the morphology is precisely the *type of building* that constructs this fabric. In relation to this category, Panerai *et al.* differentiate between a wide variety of buildings, given the wide spectrum of possibilities (traditional building, individual building, high-rise building, precarious building, mobile home, modular building, etc.). Going beyond these formal characteristics, Zárate emphasises the relevance of the *age* of the morphology in order to identify not only its origins, but also the reasons for its form and organisation. For example, some actions that sought to solve the problems of workers' habitability gave rise to the garden city that was consolidated with Howard's ideas, although in our area of study they only partially materialised (Vinuesa & Vidal, 1991). Finally, Zárate defends the importance of *function* in the definition of urban morphology as an intangible aspect since it conditions not only land use but also the urban landscape of our cities.

Following the approach of this group of authors, our articulated proposal to establish an operative taxonomy of urban morphologies related to cinema is summarised in Table 1.

Table 1. Definition of the proposed urban morphologies

MORPHOLOGY	DESCRIPTION
Historical Centre	Compact urban fabric with narrow, irregular streets, small plots and geometrically irregular blocks. Usually located in the city centre with a high architectural and heritage value and includes institutional buildings. The original layout predates the industrial revolution, usually medieval. High residential density. The fabric often has mixed functions.
Grid Extension	Urban fabric in blocks of regular streets, characterised by their grid layout and blocks with varying plots of land. The blocks follow a clear geometric order and the streets usually form right angles. The grid extensions began in the nineteenth century as a first expansion of the historic centre. The blocks are, generally, subdivided, and the entire perimeter is completely built up. High residential density. The fabric tends to have mixed functions.
Suburban Area	Linear urban fabric that develops at the edges of the compact city and follows one or more roads. Buildings are placed around an infrastructure and their characteristics are heterogeneous. Incipient suburban growth has deficient urbanisation. Medium residential density. The fabric is usually monofunctional although it includes some tertiary functions (shops, small services, etc.).
Garden City	Open and discontinuous urban fabric generally located on the periphery of the compact city. It is characterised by a considerable plot size that cannot be occupied in its entirety, and which generates dispersed construction. Many of the fabrics are made up of single-family dwellings, although not exclusively. The streets do not have specific functions beyond accessibility to the dwellings and may have non-orthogonal layouts. Cul-de-sac type streets appear. The garden city began to be established at the beginning of the twentieth century. Low residential density. The fabric tends to be exclusively residential.

Tabla 1. Continuation

| High-rise Development	Open and discontinuous urban fabric characterised by large open spaces, thanks to the construction of multi-family high-rise blocks with large communal stairwells. The residential area tends to have a rational layout of buildings and repeated residential typologies. Its urban form tends to be monotonous and its open spaces large. Residential estates began to be established in the mid-twentieth century. High or medium-high residential density. The fabric tends to be exclusively residential, with the exception of commercial spaces specifically built to accommodate this function.
Slum / Undeveloped Area	Disseminated urban fabric, with precarious urbanisation, irregular street layouts and few public services. Tends to be located on the edges of the city, in undeveloped areas. Precarious and irregular building which does not form a continuous fabric. Low residential density. The fabric is usually exclusively residential, although as they are located on the outskirts of cities, they may share the area with non-urban land uses (industry, farms, etc.).
Industrial Park	Urban fabrics generally of compact, mono-functional blocks, characterised by large, low-rise, rapidly constructed buildings with industrial/logistical functions. Streets are often laid out in large block grids with wide street widths designed for intensive logistics use. The proliferation of industrial estates began at the end of the twentieth century and they are, generally, located on the periphery of the city. The fabric has an exclusively industrial function.
Commercial Park	Monofunctional urban fabrics, characterised by large, rapidly constructed buildings with business and retail and/or leisure functions with wide streets for vehicle access. The proliferation of business parks began at the end of the twentieth century, and they are, generally, located on the outskirts of the city or in large spaces that are easily accessible by car. The fabric has an exclusively commercial/leisure function.

Source: own elaboration based on Capel (2012),

Solà-Morales (1993) (adapted), and Zárate (1991) (adapted)

3.4 The case study: Spanish mediterranean cities

Previous studies have established relationships between the landscape of the territory and specific areas of the Mediterranean coast, serving as a precedent for the spatial analysis of Mediterranean landscapes based on cinema (Reyes, 2020). However, thanks to the methodology

used, this spatial framework, which has traditionally prevailed in specific cities, can be expanded and extended to a larger geographical area, whose urban characteristics have certain similarities in their development. Precisely one of the key elements of this article is to extend the analysis of the transformation of the city and the landscape to a larger geographical area, in this case to the cities of the Spanish Mediterranean coast. This region is a geographical area comprising five Autonomous Regions of Spain: Catalonia, València, Murcia, Andalusia and the Balearic Islands. Twelve of the seventeen provinces that make up these five autonomous regions are bathed by the Mediterranean Sea: Girona, Barcelona and Tarragona (Catalonia); Castelló, València and Alacant/Alicante (Region of València); the Balearic Islands; Murcia; Almería, Granada, Málaga and a small fragment of the province of Cádiz (Andalusia).[2] For this study, the selected area corresponds exclusively to the cities with a coastline and where films have been shot (Figure 1).

Figure 1. Map of geographical distribution of film clips
in Spanish mediterranean municipalities and provinces
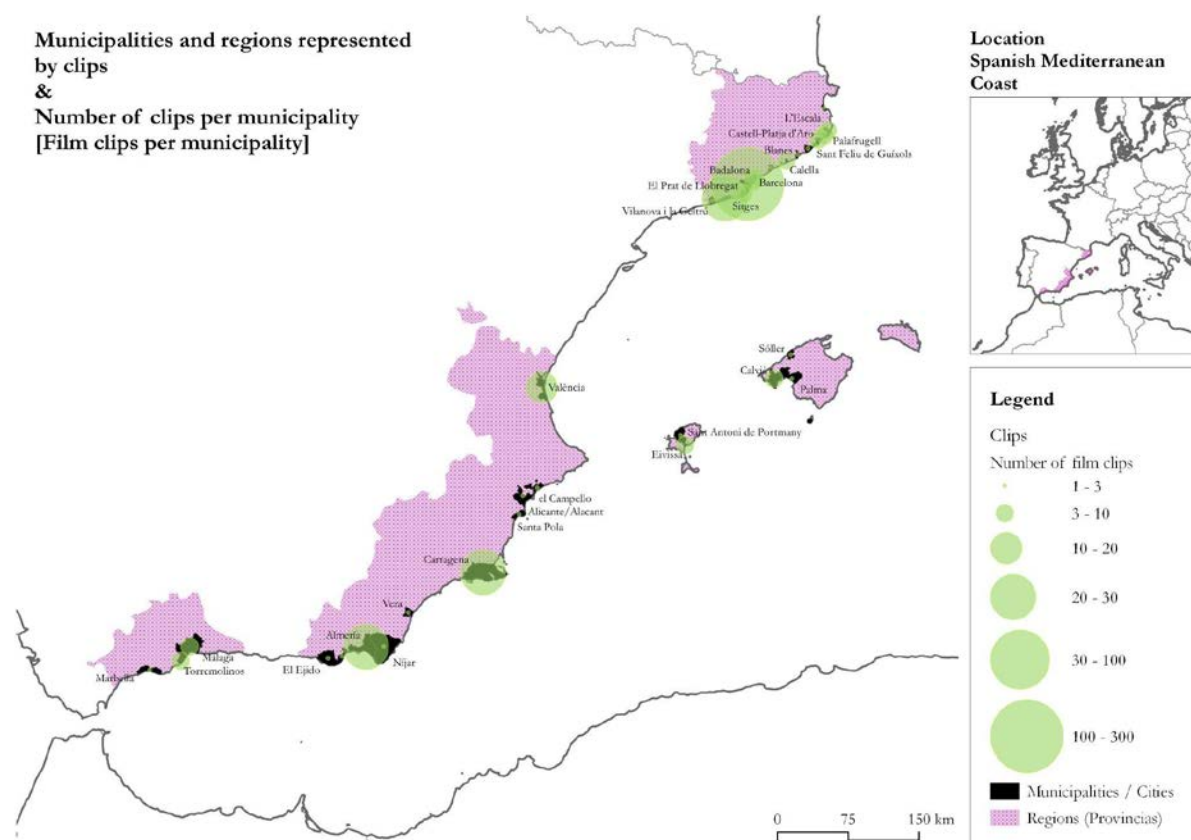
Source: own elaboration

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2   The autonomous cities of Ceuta and Melilla are not included.

The Spanish Mediterranean coast does not represent an administrative region, but there are patterns of development that show analogous urban dynamics in their cities (Pérez, 2009). These dynamics go back to the origin of the cities and facilitate the subsequent characterisation of urban morphologies, landscapes and urban elements or landmarks with analogous categories. These cities are areas with developments not only linked to a geography, but also to a history that goes back to maritime trade and settlements with diverse origins: Phoenician, Hellenistic and Roman. From the second half of the twentieth century onwards, a process of transformation of the territorial, urban, social and economic structures of the Spanish coast began, configuring tourist areas that arose spontaneously or through planned actions. In this way, urban-tourist activity constitutes the polarising and dynamizing factor of the local coastal economies, and its expansion is conditioned by the possibilities and availability of land, subject to a low agricultural interest and proximity to the sea and implies infrastructure developments. Thus, traditional activities are dismantled and replaced by the formation of an urban-touristic continuum in the Mediterranean areas. These models of implementation derived from accelerated urbanisation were the main factor to convert the coast into a specialised space, in response to the growing demand for land to develop (Burriel, 2009). Accordingly, urban growth, population increase, and the polarisation of resources will be a continuous process over decades, leading to a reversal of historical situations marked by a tendency towards emigration (Vera et al., 1997). At present, the cities of the Spanish Mediterranean coast are diverse in terms of population, with the conurbation of the Metropolitan Area of Barcelona standing out, doubling that of València. These two cities are followed by the conurbations of Alicante, Murcia and Málaga.

Spanish cities on the Mediterranean coast have developed exponentially since the 1990s, a trend that is typical of the entire Spanish geography, but which has been particularly aggravated in some areas of the peninsula, such as the Mediterranean coast (Pérez, 2009; Martí & Ponce, 2011). In fact, according to Martí and Ponce, during the 1990s, the Mediterranean strip of the Peninsula and the Balearic Islands were the Spanish geographical areas with the greatest increase in artificial land, especially residential, but also commercial and infrastructural.

In the area, the landscape constitutes an environmental, cultural and social heritage of the first order, which has a direct influence on the quality of life of the citizens and often becomes a resource for economic development. Moreover, as experts have explained, the diversity of the landscape mosaic contributes to the preservation of biodiversity and the protection against natural hazards (Nel·lo, 2007). However, in some of these municipalities, mainly, in Catalonia and València, the abandonment of agricultural activities, the dispersion of urbanisation, the impact of

certain infrastructures designed without sufficient care and functional specialisation have meant that the landscapes of these Mediterranean cities have too often undergone processes of degradation and trivialisation. If these processes continue, they could jeopardise many of the tangible and intangible values of Mediterranean landscapes, the source of stories, contexts and *atrezzo*.

4 Materials and methods[3]

Below is a description of the phases of this study, considering the procedures, use of sources, computer tools and reflections on the design of the methodology and the selection of materials for analysis. Tables 2 and 3 show the characteristics of the sample used for the development of the methodology and the results.

Table 2. Number of clips, seconds of footage and films analysed

CHARACTERISTICS	NUMBER
Clips	428
Seconds of footage	37 759
Films	51

Source: own elaboration and FACES-50 project

Table 3. Filmed coastal cities of the Spanish Mediterranean

ENTITY	CITIES WITH FILMS	CITIES WITHOUT FILMS	CITIES IN GENERAL	% CITIES WITH FILMS
Municipalities	34	244	258	13.2
Provinces	8	4	12	66.7

Source: own elaboration and FACES-50 project

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3 The authors of this article want to clarify the methodological role of the present analysis of urban morphologies within the FACES project. The methodology presented has entailed an implementation of new urban characteristics in the original database, enriching the analysis of film clips in the Spanish Mediterranean Coast. However, the selection of primary films and the location of the clips was developed within the FACES-50 project as exposed in section 4.1.

4.1 Definition of the clips

The first phase of the study comprised the selection of the films to be analysed and, respectively, of the clips that constitute the material for subsequent analysis. Based on the main methodological lines of the project FACES-50 (Spanish cities in audiovisual fiction. Documentary record and spatial and audiovisual analysis), the selection of films has established a benchmark in those films that have a score equal to or higher than 7.0 on the web portal Internet Movie Data Base (IMDB) (Gámir, 2015). Some advantages of this portal are that information on film production or shooting locations can be easily found. In the subsequent phases, the exact location had to be verified, which was helpful for the parametric evaluation of each of the variables and categories of analysis.

a) Definition of variables and categories

This phase of the study consisted in defining the elements that influence the characterisation of the city. For this phase, the categorisation was based on a previous literature review on the subject, such as those of Zárate Martín (1991) and Solà-Morales (1993). Based on these studies, the following variables and their categories were established:

- Morphology. This variable denominates the main form of the city spaces based on the characterisation of the city. The following categories have been established for this variable: historical centre, grid extension, garden city, suburban area, high-rise development, slum, industrial park and commercial park (Table 1 & Table 4).

- Age. This component refers to the age of the morphology, i.e., the period of urban development of each space in the city. For this purpose, each clip has been assigned the decade or century to which the morphology shown belongs. In the case of those prior to the nineteenth century, the century is indicated; those after this date are classified by the decades of their construction. To identify this category, the sources used are previous studies on each city and other public sources such as the Cadastre.

- Genre. This category refers to the type of film genre of each clip, filmed and geo-referenced in each of the cities. For this purpose, the information provided by the IMDB portal on the films of each clip was used. These data have been cross-referenced with the information of the urban variables, enabling us to determine the relationships between genre and urban morphology.

Table 4. Urban morphologies in films

Urban Morphology	Film Clip	Aerial View	Film / Site
Historical Centre			*Film:* Patton *Film's year:* 1970 *Site:* General Castaños Street, no number *City:* Almería (Almería)
Grid Extension			*Film:* Biutiful *Film's year:* 2010 *Site:* Gràcia Alley, 25-31 *City:* Barcelona (Barcelona)
Suburban Area			*Film:* Nannaku Prematho *Film's year:* 2016 *Site:* Gran Vía de la Manga Avenue, no number *City:* San Javier (Murcia)
Garden City			*Film:* Nicholas and Alexandra *Film's year:* 1971 *Site:* Josep Ensesa Street, 02-04 *City:* Castell-Platja d'Aro (Girona)
High-rise development			*Film:* Zindagi Na Milegi Dobara *Film's year:* 2011 *Site:* Ronda Del Mig, no number *City:* Barcelona (Barcelona)
Slum / Undeveloped Area			*Film:* The Wind and the Lion *Film's year:* 1975 *Site:* Belén Street, no number *City:* Almería (Almería)
Industrial Park			*Film:* Biutiful *Film's year:* 2010 *Site:* Calle Gravina, no number *City:* Sant Adrià del Besòs (Barcelona)
Commercial Park			*Film:* El reino *Film's year:* 2018 *Site:* Pius XII Avenue, 4 *City:* València (València)

Source: own elaboration from the clips of the FACES-50 and PNOA (IGN) project

- Origin of film production. This refers to the country of origin of the film production. Three categories have been distinguished for its study: local, when the film is a Spanish production, foreign and co-production, when Spain participates in an international production of several countries. This variable enables us to detect which spaces in the city should be contemplated when planning film shoots.

- Functions. This characteristic refers to the main functions of the city. A total of five categories have been defined: *residential, economic activity, facilities, public space* and *mixed-use* (the case of those city spaces that have more than one of the above urban functions).

- Public space. Given the importance of public spaces for outdoor filming and due to the fact that they constitute the sites of film settings, the following categories have been established: *park, street, promenade, square, beach, port, garden, viewpoints, avenue, seafront, topography elements* and *others*.

- Landmarks. Landmarks are understood as the main nodes of connection in the urban fabric. Landscape landmarks constitute spaces referenced in film clips, i.e., elements that situate the viewer in the different parts of the city due to their rapid identification that helps to locate the spectator. The following categories have been established: *monuments, seafront elements, streets, singular buildings, buildings, cultural and leisure facilities, ports, squares, facilities, parks and gardens, airports, viewpoints, roads, industrial elements* and *topography elements*. In addition, to complement this variable, we have considered the relevance that landmarks have depending on the origin of the production, being able to define those that may be more popular in national productions, international productions or co-productions.

b) Clip capture procedure

In this phase, we chose the images of urban spaces represented in the previously selected filmography. First, we obtained the information from IMDB where there are some initial clues about film location (Gámir, 2015). Next, while watching the films, we fixed or paused the image at the moments of scenes shot in outdoor spaces and took screenshots of these clips. For this procedure, any type of video software may be used, if we have the video file or DVD to be analysed. Any free *software* such as *VLC Media Player* can be used. This type of format can be watched and the clip may be captured with the *Video/Screenshot* function. If the film is watched on an entertainment platform such as *Netflix, HBO, FilmIn* and similar, the screen can be captured with the *ImprPant* button on the keyboard and, in the free software *IrfanView*, it can be pasted and saved as an image file, maintaining its maximum quality in JPG, TIFF or similar format, without occupying an excessive file size.

Finally, a coding system was established that includes the name of the film in a short format followed by a sequential number to help to differentiate it in further analysis. For example, for the first outdoor video clip from the film *Vicky Cristina Barcelona* (Allen, 2008) we used the following

file name: *VickyCristinaBarcelona_01* or *Vicky_01* or a similar encoding. In this way, this encoding can be linked to the spatial databases developed in later phases.

c) Geolocation

In the next phase, the selected outdoor scenes were located with coordinates, provided that they met the requirement of being located in an urban municipality on the Spanish Mediterranean coast. To generate their location, we interpreted the photographic image to identify the elements therein (in all its possible planes: foreground, middle ground and background) and located them with maximum precision in a GIS software or a cartographic viewer, such as *Google MyMaps* or *Google Earth*. This delicate operation starts with the generic location (province, city, population centre, etc.) provided by IMDB, which is not always accurate enough, and it is subsequently corroborated with aerial photographs and 3D views such as those offered by *Google Maps*, *Google Earth* or *WMS (Web Map Service)* services. In addition, in this case, those provided by official regional, or state mapping institutions and organisations have been used. A clear example is the *PNOA service (National Plan for Aerial Orthophotography)*. This geolocation is essential for the next phase in which the urban space and its morphologies are characterised. It should be added that these captured scenes become part of the *Spain Audiovisual Map*[4] cartographic viewer, included in the FACES project.

4.2 Visual analysis and identification of variables

The characterisation stage consists of assigning attributes to each of the variables mentioned above. For each variable, there is a different procedure that is conditioned by the sources available for obtaining the information that determines each of the morphological characteristics.

In relation to the morphology variable, a photointerpretation of the urban fabric in which the scene or clip is inserted was carried out. Additionally, various sources were consulted, such as those derived from urban and spatial planning, detailed studies and other technical and scientific works. In this way, each was assigned with one of the categories previously named in the table of attributes of the georeferenced layer of clips. The main factor influencing this assignment is the academic profile of the clip evaluator, the most suitable being one specialised in urban studies.

The determination of the age of the morphology in which the clip is inserted is a variable in which precision must be a priority. For this study, the decades of the nineteenth, twentieth and twenty-first centuries have been established for dating the clips. For those morphologies

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4 FACES Project. Spain Audiovisual Maps: https://geocine.uc3m.es/faces/mapa_faces.html

generated before these dates, the dating was performed by centuries. This decision was taken due to the high degree of development of cities over the past decades, when the main urban expansions took place in Mediterranean cities. In order to ensure accuracy, we have opted to consult the data of the architectural elements close to the scene analysed. These data were obtained by consulting the online viewer of the Cadastre[5], web portals on heritage and urban tourism, and technical and scientific studies that focus on the studied cities or on the inner environments of their urban fabric.

It should be noted that the film genre is usually mixed and is grouped in some categories. Therefore, it has been necessary to disaggregate and assign it to each type of morphology. In this way, it has been possible to study the relationships between gender and morphology statistically. The most common source for processing these data is the IMDB[6] portal or similar ones, such as FilmAffinity[7] or SensaCine.[8]

As in the case of the film genre information, the data on the origin of film production have been drawn from the same sources. In a first stage, they were classified by country or group of countries of origin of the production. Subsequently, they were grouped into three main categories: local (exclusively Spanish productions), foreign (productions from countries other than Spain) and co-productions (productions that combine the previous typologies). This level of detail allows the database to be cross-referenced, obtaining detailed characteristics of the spaces about which national or international cinema is interested.

The urban functions have been defined by checking the official cartography of the city councils, regional cartography institutes and the different products of the National Centre for Geographic Information of the Ministry of Development. In addition, this information can be contrasted with other cartographic products such as Google Maps and Google Earth, so that 2D/3D aerial views and human scale views offered by its StreetView tool can be used. This procedure has also been applied to identify the type of public spaces as well as landmarks since it is necessary to contrast the information in order to detect the urban elements that appear in the selected clips.

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5 Cadastre website: https://www.sedecatastro.gob.es

6 Movie Data Base website: https://www.imdb.com

7 Film Affinity website: https://www.filmaffinity.com

8 SensaCine website: https://www.sensacine.com

4.3 Statistical analysis

To finalise the methodological process, we worked with the database generated including the characteristic attributes of the morphology linked to each clip. The operations carried out consisted of generating sums for each of the variables or crossing more than one, using as units of measurement or magnitudes the number of clips or the number of seconds of the scenes filmed in a location. The results are shown graphically in absolute or percentage values.

5 Results

The distribution of the scenes filmed reveals that there is a great interest in the Spanish Mediterranean coast. However, not all the spaces have been captured by the cameras, and there are shadows and spatial gaps in this region. In this respect, the following figures show the concentration of these clips, by province, highlighting the dominance, with more than 70 percent, of the city of Barcelona. In accordance with the parameters established in the methodology and observing the map of clip distribution, we can see that there are large territorial differences in the coastal corridor between the provinces of València and Barcelona (Figure 1). There is an absolute absence of filmed scenes. A similar situation occurs in the area surrounding the coastline of Málaga, which is isolated due to the gaps in the coastline of Granada and the Mediterranean area of Cadiz. This fact invites us to reflect on the importance of spatial connectivity with the main regional centres of the country, especially in the Peninsula. The presence of the main transport hubs (international airports and high-speed connections), the influence of policies to promote filming and the development of infrastructures for film development will be key factors that will define the logistical and functional issues demanded by the business of the film industry.

In summary, Figure 1 shows the filled spaces of the cases indicated above, as well as the gaps in the provinces of Tarragona, Castelló and Granada. These findings are the result of the score established in the methodology and are also accompanied, to a lesser degree, by the imaginary of sectors such as tourism. In this way, it is possible to differentiate the more domestic spaces from the large filmed spaces coinciding with the regional tourist centres. In this sense, the role of Film Commissions and the *know-how* of film promotion services must be considered. An example of this is the Ciudad de la Luz in the Region of València.

Figure 2. Percentage of film clips per province
in Spanish Mediterranean coast municipalities
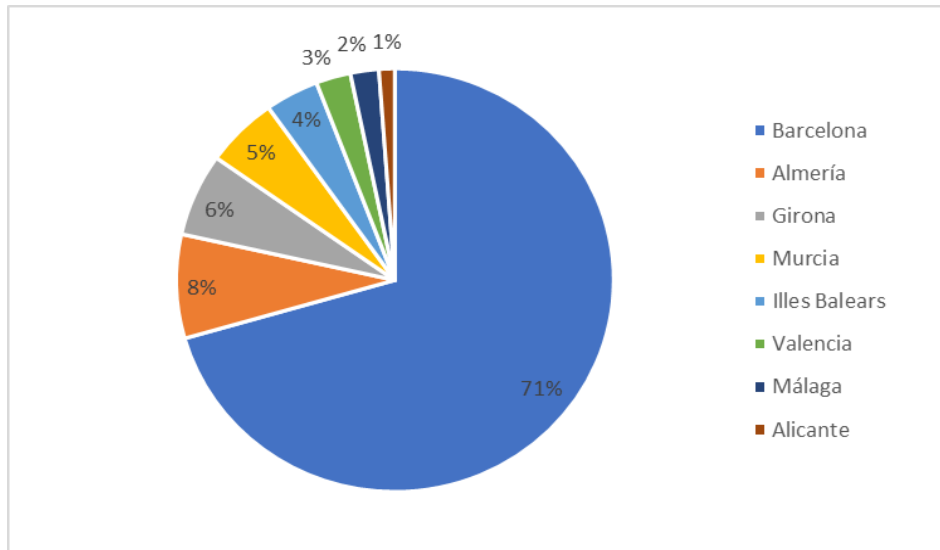
Source: own elaboration

Urban morphologies have been considered from two perspectives, the quantification of the volume of clips and their duration in time. Both quantifications have been crossed with types of morphologies. In the first case, we can observe that the historical centre and the grid extension account for almost two thirds of the total number of scenes filmed (Figure 3).

Figure 3. Percentage of film clips by urban morphology
in Spanish mediterranean coast municipalities
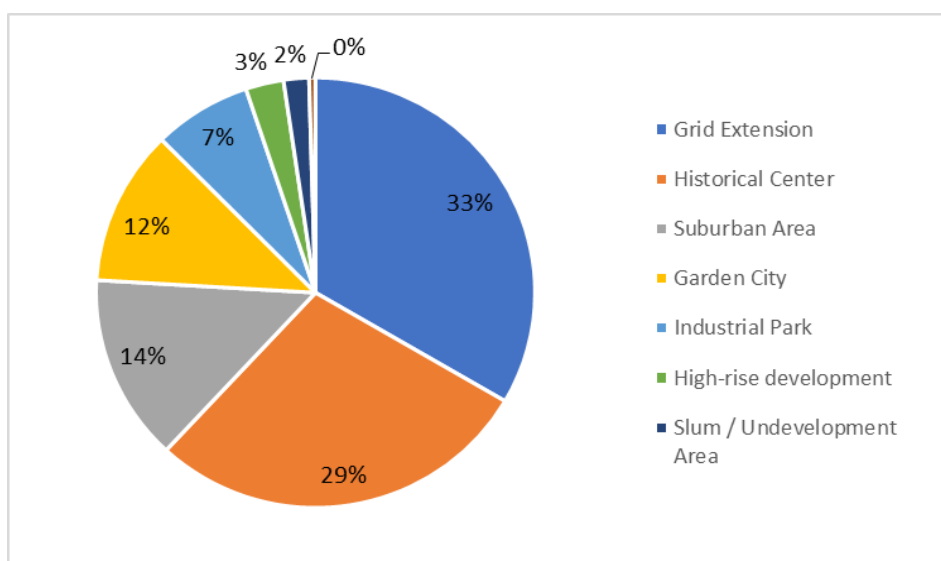
Source: own elaboration

In the second case (time in seconds) (Figure 4), we can observe that the scenes filmed in grid extensions exceed half the time of the total number of scenes. Similarly, the time spent filming in historical centres is proportionally reduced to less than 20 percent. Their sum is indeed higher than in the previous case (71%).

Figure 4. Percentage of seconds in film clips by urban morphology in Spanish mediterranean coast municipalities
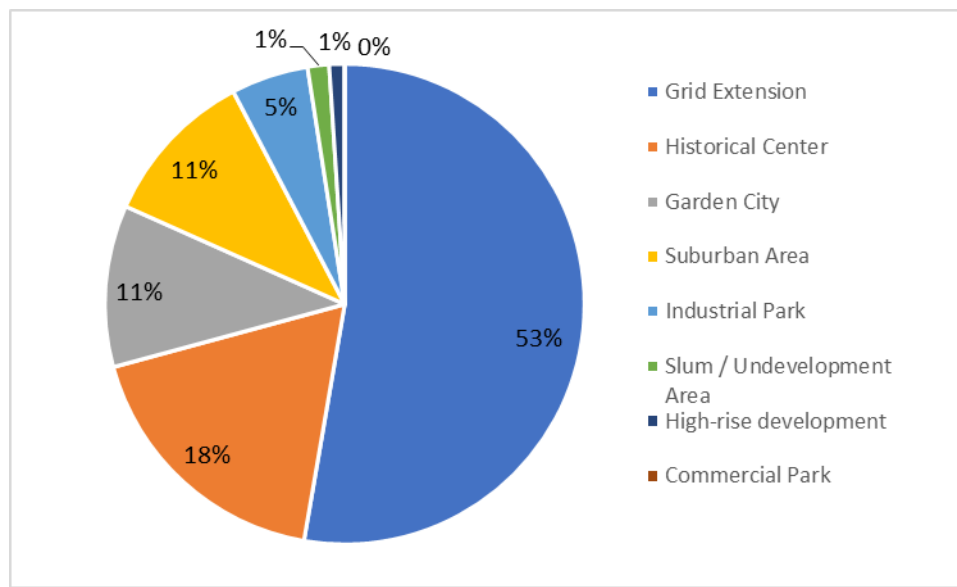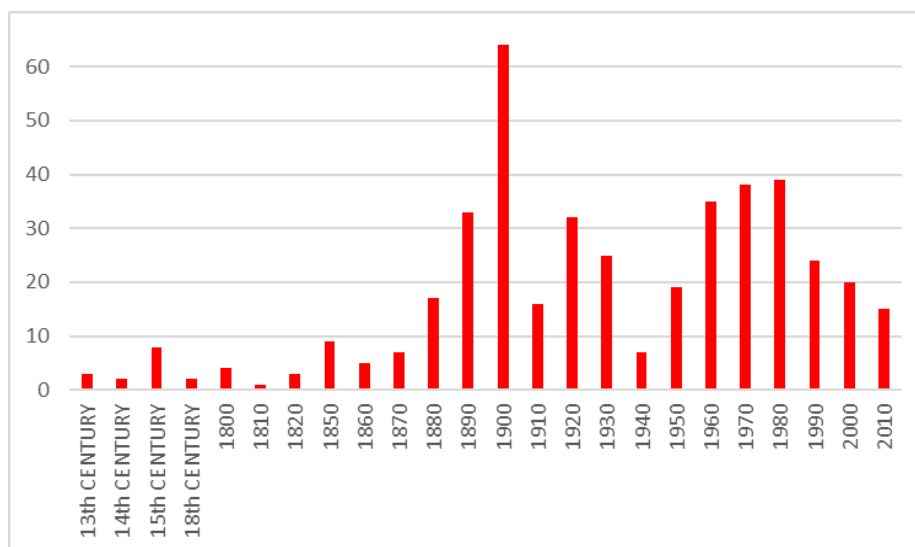

Source: own elaboration

In both cases, the high presence of the grid extension is conditioned by the large volume of clips located in Barcelona and the high prevalence of this type of urban space, which makes up a large part of the city's urban fabric. Moreover, although in a lower proportion, this is a common pattern in the rest of the Mediterranean cities. We must also consider that the historical Mediterranean centres occupy a small surface area in comparison with their subsequent urban growth. This is due to the change of orientation in land use of coastal areas, which were productive but historically insecure, due to piracy or exposure to invasions, a radically different circumstance in relation to the current situation (Gómez Moreno, 1989; Vera et al., 1997). Therefore, despite the photographic and filmographic attractiveness of Mediterranean cities, later urban growth offers a larger shooting space, probably more accessible for filming scenes because disrupting the daily life of a historical centre can be a more laborious task than shooting a film scene in an urban growth space. Generally speaking, the grid extensions and historical centres have constituted the most consolidated and representative enclaves of the city, thus being more recurrent in filmography.

Regarding the time scale of urban origin of the spaces represented (Figure 5) we can see that the morphological origin of the main areas filmed is the end of the nineteenth century, also incorporating the urbanised spaces of the present day, with the main peak of spaces corresponding to the morphologies at the turn of the century (between the nineteenth and twentieth centuries). This stage also coincides with the beginning of the development of cities outside the city walls, with the first grid extensions and urban areas with more residential characteristics. However, there was a decline in urban spaces in the 1940s, due to the possible disappearance of part of the urban fabric as a result of the Civil War and the lack of real estate and construction activity in the post-war years and economic recovery. As with the previous variable, the continuous enlargement process of the city of Barcelona, which began in the second half of the nineteenth century and the high volume of representations of the city in this research might alter the result for the Mediterranean region, although a parallel process occurred in much of the coastal area.

Figure 5. Distribution of film clips by age of urban morphology
in Spanish mediterranean coast municipalities

Source: own elaboration

From a time perspective, focusing on the filming time in relation to the age of the urban morphology, a shift from the previous temporal peaks to the beginning of the new millennium and the end of the nineteenth century can be observed (Figure 6). The first shift is due to newly built urban areas and the extension of the possibilities for outdoor filming due to the development of film technology. In the second case, we can observe how the presence of grid extensions continued to persist compared to the previous figure, although less significantly.

Figure 6. Time distribution of film clips by age of urban morphology
in Spanish mediterranean coast municipalities
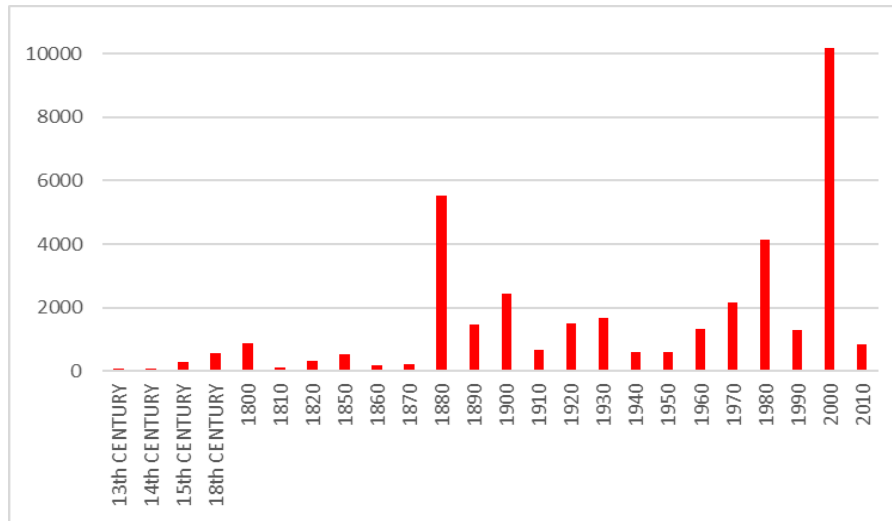
Source: own elaboration

From the point of view of film genres, drama (78.5%), romance (37.9%), comedy (30.1%), action (21.5%), suspense (13.6%), horror (7.07%) and fantasy (5.8%) stand out. On the other hand, the cross-referenced data reveal that the highest percentages of storylines are concentrated in the areas of the historical centre and grid extension. In fact, in Table 4, we can observe that in relation to the number of clips located in our film sample, 75.9% correspond to the grid extension, 69.6% to the historical centre, 31.1% to the garden city, 30.6% to suburban area and 16.8% to the industrial park.

In this sense, collecting the percentages equal to or higher than ten and specifying the urban morphology and genre, we can observe that the historical centre is specialised in drama (27.9%) and comedy (12.8%). Monumental landmarks constitute a resource that also helps to establish climaxes where the stories are accompanied by the contexts represented. The garden city has been the setting for drama (30.8%) and action (15%). The suburban area has been used mainly in the genres of drama (35.9%) and action (9.9%). In the grid extension, the genres most represented are drama (35%) and comedy (17.8%), the same genres that feature in the commercial park, albeit with equal values: comedy (25%) and drama (25%). Drama prevails over the other genres in the cities analysed. This trend is also evident in the urban morphologies of the industrial park (drama 40.3% and action 12.5%), and the undeveloped areas (drama 42%, action 21% and adventure 21%). In the latter, we can highlight the adventure genre, which, together with the action genre, is more versatile when searching for locations to accompany the plot of the film. In these genres, the aesthetics of the settings, the diversity of what is represented and

sometimes of what is supplanted, have many more possibilities in areas that are not recognisable in less consolidated periurban spaces of cities and provincial capitals.

Table 5. Distribution of film clips by genre and urban morphology (%)

FILM GENRE (%)	HIST. CENTRE	GARDEN CITY	SUBURB. AREA	GRID EXTENS.	COM. PARK	INDUST. PARK	HIGH-RISE DEVELOP.	UNDEV. AREA
Action	4,7	15,0	9,9	9,5	0,0	12,5	3,6	21,1
Adventure	2,0	0,0	1,5	2,5	0,0	2,8	0,0	21,1
War movie	2,0	0,0	0,8	0,9	0,0	0,0	3,6	0,0
Sci-Fi	0,0	0,0	0,8	0,0	0,0	0,0	0,0	0,0
Comedy	12,8	8,3	9,2	17,8	25,0	6,9	10,7	5,3
Black Comedy	0,0	0,0	0,8	0,0	0,0	2,8	0,0	0,0
Crime	7,0	2,3	8,4	5,5	0,0	0,0	0,0	0,0
Drama	27,9	30,8	35,9	35,4	25,0	40,3	42,9	42,1
Fantasy	3,0	0,8	1,5	3,7	0,0	0,0	0,0	5,3
History	0,7	7,5	0,8	0,0	0,0	0,0	0,0	5,3
Intrigue	3,0	0,8	0,8	0,0	0,0	0,0	0,0	0,0
Mystery	6,4	2,3	4,6	2,2	0,0	1,4	0,0	0,0
Musical	1,7	0,0	0,0	0,0	0,0	2,8	7,1	0,0
Western	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Romance	13,8	26,3	13,0	14,8	25,0	20,8	17,9	0,0
Suspense	5,0	3,0	9,2	4,9	0,0	9,7	14,3	0,0
Terror	6,0	0,8	2,3	2,5	0,0	0,0	0,0	0,0
Thriller	4,0	2,3	0,8	0,3	25,0	0,0	0,0	0,0
TOTAL	100	100	100	100	100	100	100	100

Source: own elaboration based on data from Internet Movie Database (IMDB)

The relationship between the origin of film productions and urban morphologies reveals much of the interest in certain urban spaces. In the case of the Spanish Mediterranean coast, we can see that the *historical centres* constitute the space of co-productions. On the other hand, the *garden city* is the space of local productions. Unlike the historical centres, the degree of internationalisation of the garden city is much more limited. *Suburban areas* show a mixed interest, with both local and international producers. The grid extensions are internationalised

spaces, since co-productions and foreign productions jointly represent more than eighty percent of the clips filmed there. In the case of *commercial parks*, there is equal interest between national and international productions. *Industrial parks* and *high-rise developments* are dominated by co-productions in comparison to the interest of foreign productions in undeveloped areas or slums. This distribution shows the degree of internationalisation of the urban fabric and, therefore, of the capability to reach a greater number of spectators depending on the distribution of films. Indeed, the impact of films might be greater in those areas where international productions or co-productions dominate, as they are included in an expanded film market conditioned by issues such as original languages, dubbing and subtitling.

Figure 7. Percentage of film clips by origin of film production
and urban morphology in Spanish mediterranean coast municipalities
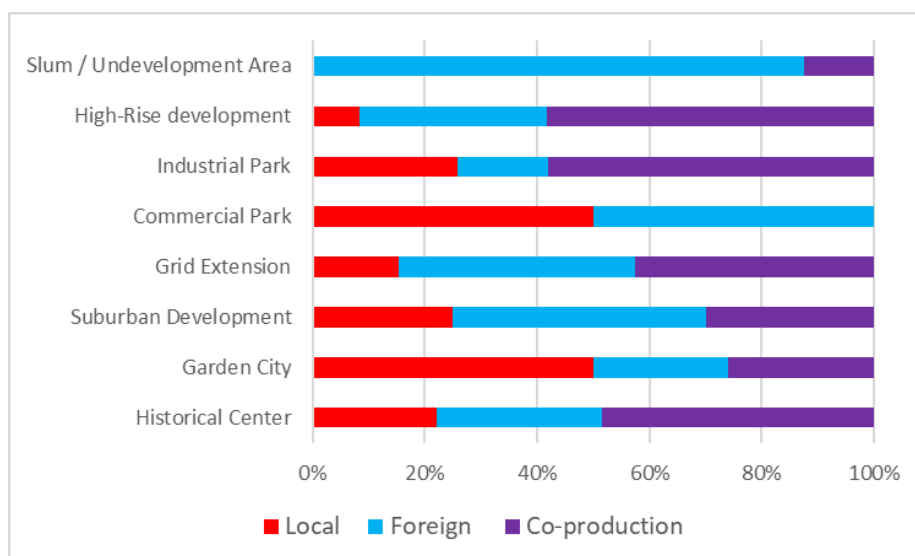
Source: Own elaboration based on data from the Internet Movie Database (IMDB)

The list of existing urban functions of the spaces represented by the selected filmography for this study shows a relatively even distribution (Figure 8). The residential function stands out among those detected, representing one out of every four clips studied. Public spaces are of lesser importance, featuring in 14 percent of clips.

Figure 8. Percentage of film clips by type of urban function
in Spanish mediterranean coast municipalities
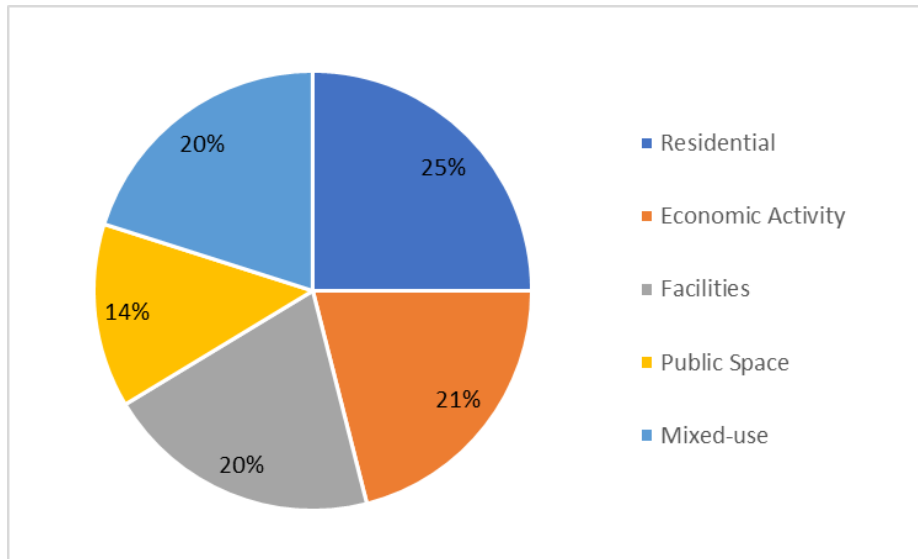
In a complementary way, contemplating the percentage of seconds dedicated to each urban function, an imbalance can be seen in comparison with the previous figure (Figure 9). Facilities acquire a notorious importance, being present in 35%of the total footage. In second order of importance are the scenes shot in residential areas. The rest of the functions have values of less than 20%.

Figure 9. Percentage of filmed seconds by type of urban function
in Spanish mediterranean coast municipalities
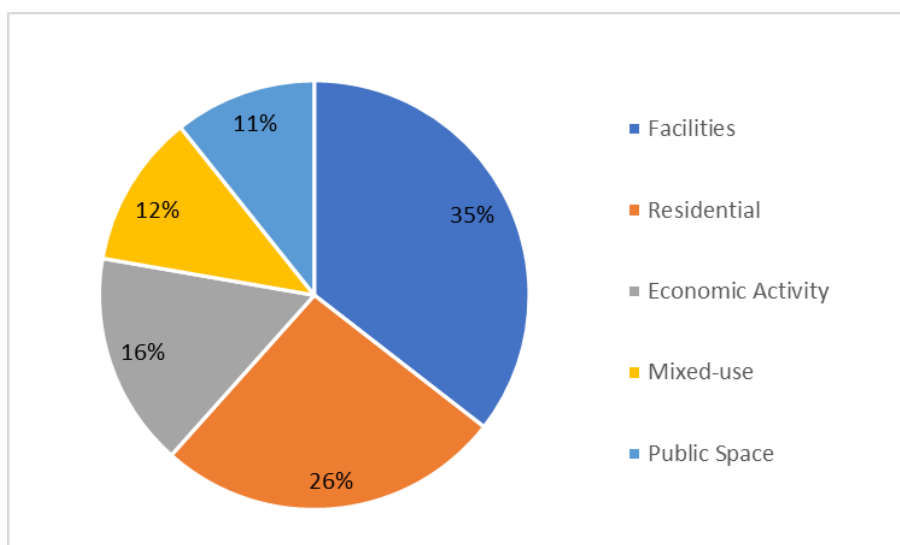
The information on the time dedicated to public spaces in the scenes shows (Figure 10) that *parks* are the most important public spaces, with more than 10,000 seconds of footage in the total filmography studied. They are followed, in order of importance, by spaces that normally have less surface area and space for filming: *streets*, *promenades*, *squares*, etc. It is possible that the surface area and the urban components of these spaces (trees, fountains, hedges, wide views, absence of traffic, etc.) make parks good locations for filming.

Figure 10. Number of seconds filmed in public spaces
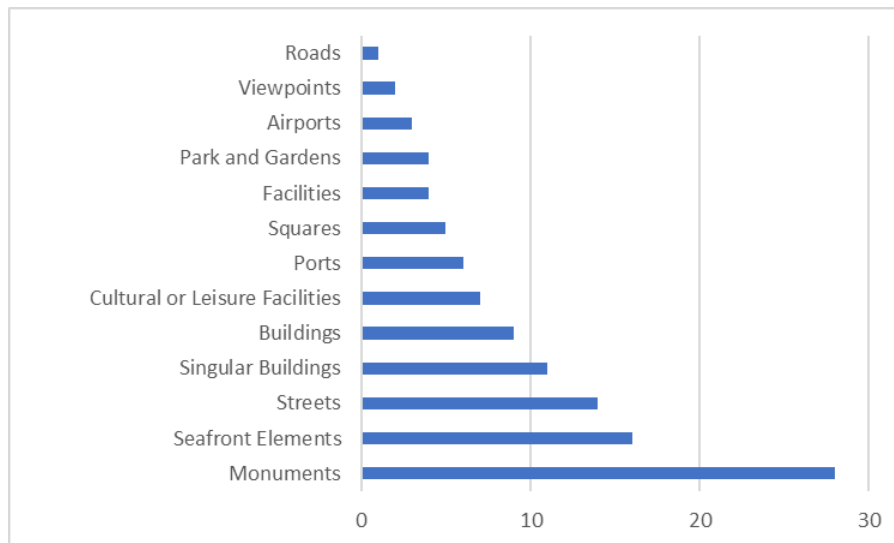by type of film in Spanish editerranean coast municipalities
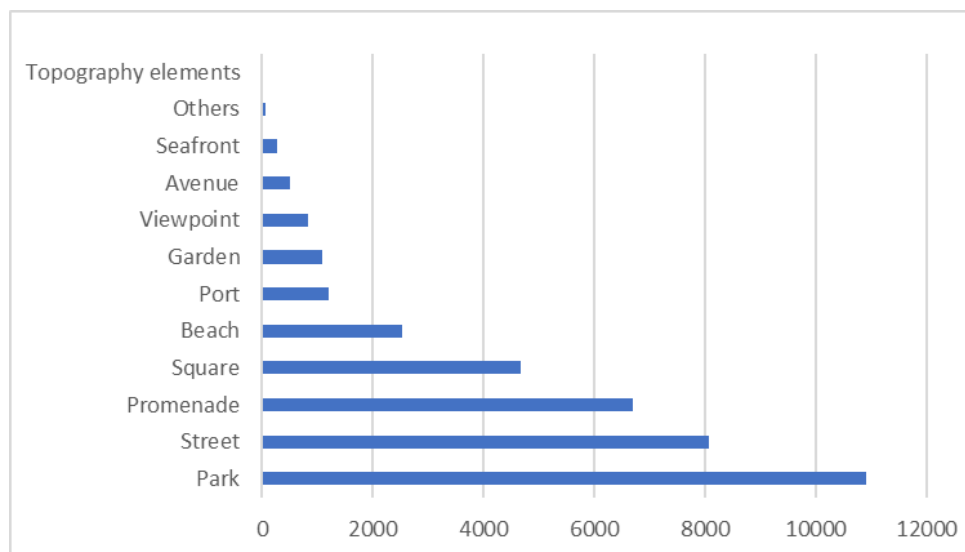
Source: own elaboration

Landscape landmarks are representative elements that have a high visual impact in clips, with variations in terms of the interest of the production according to the origin of cities that has promoted it. Figure 11 shows how the main landmarks in foreign productions focus on heritage elements and the seafront. This circumstance accompanies the projection of the city and invites the attention of foreign spectators, indirectly encouraging the linking of these morphological elements with other activities which, in a more or less immediate way, will benefit from them. This is the case of film productions such as the film *Vicky, Cristina, Barcelona* (Allen, 2008) and the dissemination of the urban landscapes of this city.
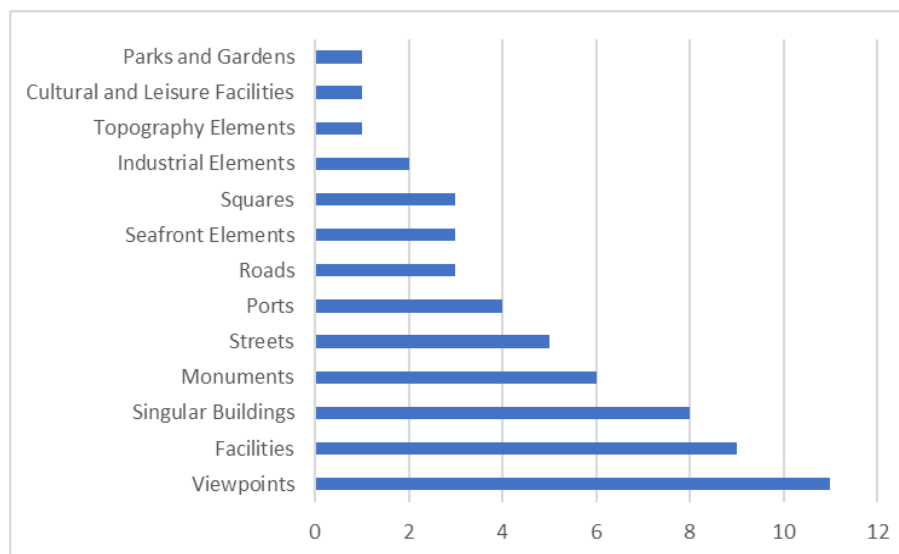
Figure 11. Type of landmarks in foreign film clips
in Spanish mediterranean coast municipalities

Source: own elaboration

Figure 12. Type of landmarks in locally produced film clips
in Spanish mediterranean coast municipalities

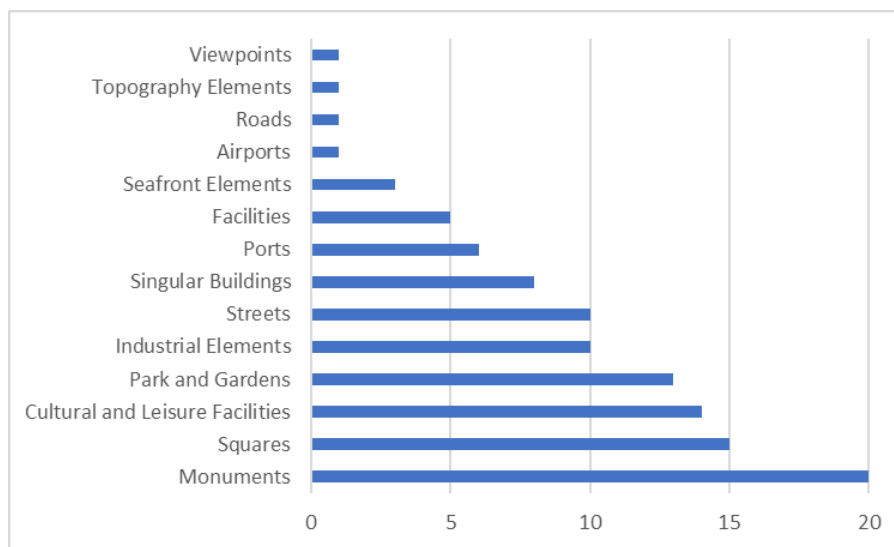Source: own elaboration

Regarding landmarks in Spanish films, a decreasing trend can be observed in terms of their volume and typology (Figure 12). There is a tendency to trivialise the elements that stand out as landmarks in clips. In other words, monumental landmarks do not stand out so much, as shown in Figure 12, as city observation areas (viewpoints) or the most relevant facilities, which are

recognised by the resident population but not so much by visitors, as they are not elements of tourist interest.

Meanwhile, in co-productions, there is a clear influence of the international part of the film production. As a result, these heritage elements and landmarks of the city once again take on a leading role. However, they continue to appear, proportionally, in a smaller number of clips.

Figure 13. Type of landmarks in clips of co-production films
in Spanish mediterranean coast municipalities

Source: own elaboration

From this analysis of landmarks, we can conclude that the influence of internationalisation tends to show the most touristic and well-known part of the city for both visitors and residents. On the other hand, the more common and everyday city is shown in local filmography, showing a link with the more regular functions of the city and reflecting elements of the everyday life of the citizens.

6   Discussion and conclusions

This research, which is based on of the afore-mentioned FACES project, seeks to establish the importance of urban morphologies, their geographical location and their temporal context in the diegesis established in a filmography, which was previously filtered according to the IMDB assessment criteria (over 7 points). Undoubtedly, this has given rise to a notable bias in the sample (causing gaps), which we have attempted to overcome by implementing other geo-referencing tools explained in the methodology. This has allowed us to adjust the study area to

coastal cities located on the Mediterranean strip including those in Catalonia, the Region of València, the Balearic Islands, Murcia and Andalusia.

A considerable influence of the score filtering can be observed for the selection of films with the score criterion (greater than or equal to 7.0) established in IMDB. This criterion, established in the FACES project, has, to a large extent, conditioned the presence of a greater number of film productions of international origin, favouring the most successful among the public of this portal. Considering this circumstance from the point of view of the transfer of results, for instance to the tourism sector and its planning, this can condition the design of potential domestic tourism routes linked to productions for state or regional consumption. However, it should be clarified that this criterion allows such a wide area as the Spanish Mediterranean coast to be addressed, and the score can be adjusted according to the geographical scope of the methodology's execution and the volume of films it contains. In this sense, the method can be extrapolated to another geographical area and is a valuable model in terms of information generation and management.

In addition, a review of the bibliography related to Cinema and the City has been carried out from a perspective not only of urban planning, but also of imaginaries, geographical contexts, evolution and the nature of the projected spaces. Therefore, we have sought to establish a justification of urban morphologies, which we have adjusted to the clips analysed. Undoubtedly, the definition of urban morphologies, which we have used to establish a typology in accordance with the scenes and spaces filmed, is based on the contributions of Lefebvre (1974), Solà-Morales (1993), Panerai et al. (1980a; 1980b) and Zárate (1991). Beyond the structures, the city and its forms are also determined by other contexts (geographical, temporal, economic, social, historical), which means that a city in itself can have unique characteristics that determine its choice as a setting for a film, particularly in the Mediterranean strip, where urban spaces have evolved, determining morphologies and landscapes. The fact that many parts of the coast were initially marginal spaces, where fishing and subsistence agriculture were the predominant activities before the emergence of tourism, together with the rapid and sometimes chaotic urban growth, has generated spaces of unique variety. This diversity has facilitated the localisation of a wide range of plots and stories and also interesting filmic replacement, providing these spaces with versatility and opportunities to be used for filming. The eight urban morphologies proposed, exemplified through clips, were enriched with attributes such as the age of the specific location, the film genre, the origin of the production, the functions performed by the city, the role of public spaces and the monumental landmarks that facilitated the settings and urban landscapes presented and represented in the filmic narrative. To this end, tools such as geolocation

(*MyMaps*) have been incorporated into the basic methodology of the *FACES project*, which have enriched the analysis and identification of the morphologies through the clips, generating a database with 428 clips, fifty-one films located in the eight provinces of the Spanish Mediterranean coast.

Undoubtedly, cinema generates imaginaries and projects urban branding. In the results of this article, we have been able to confirm that the most filmed spaces have been grid extensions as opposed to other morphologies such as historical centres and other spaces. The question is whether the urban fabrics condition the film genres or vice versa, and the answer seems to be that they construct a relationship. The filmed spaces transfer an imaginary to the general public about the reading of grid extensions, industrial parks, garden cities and landmarks such as squares or parks, which are also closely related to the storylines.

As a sample or representation of the above, it is interesting to note the diversity and versatility of genres, locations, the nature of the productions, as well as the dates of filming, in order to demonstrate the interest in locating film plots on the Spanish Mediterranean coast for decades (Table 6).

This study reflects on the role of filmmaking in the city in an applied and replicable way. This replicability is based on the methodological procedures and the sources consulted for its development. The methodological procedures implement tools that are freely accessible, such as the geographic information systems used, including the collaborative cartographic viewers, something that allows a team of researchers, such as the one that has produced this work, to jointly gather information with a feasible division of tasks. In relation to the sources, those of both a public and private nature have been used. However, in both cases they are public and accessible to the vast majority of developed film-producing countries. By way of example, this study could be replicated for other thematic geographical spaces, such as the network of cities on the Camino de Santiago or other spaces with similar characteristics, such as the Cantabrian coast, the Spanish Meseta or the Atlantic strip.

Table 6. Sample of films, genres and urban morphologies

FILM	GENRE	MAIN URBAN MORPH.	CITY	PRODUCT.	TOTAL CLIPS	REPRESENT. DIVERSITY
Chase a Crooked Shadow (1958)	Mystery / Terror	Historical Centre	Palafrugell & Palamós	Internat.	15	4
Lo strano vizio della signora Wardh (1971)	Suspense	Historical Centre	Sitges	Co-produc.	11	2
Quién puede matar a un niño (1976)	Mystery / Terror	Historical Centre	Maó	Local	11	3
Todo sobre mi madre (1999)	Drama	Historical Centre / Grid Extension	Barcelona	Local	25	4
L'auberge espagnole (2002)	Comedy / Drama	Historical Centre	Barcelona	Co-produc.	24	4
Vicky Cristina (2008)	Comedy/ Barcelona Romance	Grid Extension / Garden City / Historical Centre	Barcelona	Co-produc.	21	5
Biutiful (2010)	Drama	Grid Extension	Barcelona	Internat.	28	5
Tres metros sobre el cielo (2010)	Drama / Romance	Garden City	Barcelona/ Sant Adrià del Besòs	Local	41	6
Tengo ganas de ti (2012)	Drama / Romance	Historical Centre / Grid Extension	Barcelona	Local	22	5
100 metros (2016)	Drama/ Comedy	Grid Extension	Barcelona	Local	13	3
Megan Leavey (2017)	Drama / War	Historical Centre	Cartagena	Internat.	12	1

Source: own elaboration

Second, the analysis of filmic representations has enabled the research team to reflect on the factors that influence the selection of the spaces for setting shots and plots. The anthropological characteristics of the filming space can overly condition the selected heritage elements linked to ways of life. This is the case of the environments in which local folklore, traditional activities

among others are developed. Accessibility to the space for filming is also key for the *location manager* (Reves, 2003) (the professional responsible for locating sites for filming), taking into account the geographical factors of the location and its characteristics. It must be considered that filming involves moving goods, preparing catering, booking hotels and accommodation for the crew, spaces for setting up the shoot, etc. All of these logistics are favoured by road and train communications and the availability of infrastructures, such as airports, and work infrastructures for post-production or studio shoots in the well-known film cities. This situation means that areas such as the study area of this article are prepared to host this type of activity, given that touristic landscapes have many infrastructures and facilities that are compatible with the development of filming. The Mediterranean Sea and its luminosity, as well as the facilities for filming, its hotel capacity, its infrastructures and good accessibility, were already determining factors for locating films shortly before mass tourism emerged. Even the construction of *Ciudad de la Luz* could offer the possibility of consolidating filming that could diversify the tourist offer of the Costa Blanca, reinforcing the branding of Alicante, as it has done in Almería (Martínez-Puche *et al.*, 2021). Outstanding film shoots in the film history of the Costa Blanca, such as *John Paul Jones*, 1959; *Return of the Seven*, 1966; *The Three Musketeers*, 1973; *The Four Musketeers*, 1974; and *Astérix aux Jeux Olympiques*, 2008, could have articulated an imaginary identity in the province, reinforced by the existence of studios and the development of the network of film offices throughout the territory. Undoubtedly, opportunities have been missed since the closure of the studios in 2012 (Puche, 2012).

In another vein, this study shows which spaces are of interest for film productions according to the urban characteristics of the city and the producers themselves (Crumbaugh, 2007). These circumstances confirm that the proposed method of analysis is capable of optimising the relationship between economic activity and territory, being able to adapt the available urban resources to the type of genre, the degree of national or international reception according to the origin of the production and is even able to suggest possible spaces for replacement. The research has demonstrated how urban morphologies define plots and settings and how films can construct urban imaginaries. Therefore, this proposal can be used by public bodies and private companies to design tourism products in the urban spaces filmed and can help to diversify the tourism and cultural offer of cities (Del Rey-Reguillo, 2021).

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