

An end to Spain's urban morphological isolation?

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Abstract. *In comparison with North America and other large European countries, Spain has historically had a limited international presence in academic urban morphology. This is remarkable in light of the striking character of Spain's urban heritage and the large volume of Spanish writing on the country's urban history and urban form. Possible reasons for this relative international isolation are suggested and the Spanish literature relating to urban morphological themes is reviewed. This literature contains a wide variety of themes, but no distinctive Spanish 'school' of urban morphology has emerged. However, the ISUF Conference in 2017 in Valencia signalled a stronger presence of Spanish urban morphologists on the international stage. An analysis of the Spanish contributions at this conference and other recent studies suggests a growing interest in the practical applications of urban morphological research. Spanish urban morphologists may be an integral part of a wider movement to use urban morphology as a 'tool' rather than as an end in itself.*

Keywords: Spain, history of urban morphology, historical isolation, heterogeneous literature, internationalization, practical applications

This paper is prompted by the ISUF Conference in Valencia, September, 2017, the theme of which was *City and territory in the globalization age*. The reference to globalization is particularly apposite in relation to the history of urban morphology as a field of study in Spain and especially to its apparently high level of historical insularity. Certainly, the curious absence – at least up to the recent past – of Spain and Spanish urban morphologists from ISUF proceedings and wider urban morphological discourses is noteworthy. This is especially remarkable given three specific considerations. First, there is the unique and distinctive character of existing built forms within Spanish cities. Few countries, even those with an equally long urban tradition, can rival the physical presence of Spain's urban heritage. Secondly, there is the fact that the

academic study of urban history, including the form of cities within Spain is, and has been for a long time, prolific. Thirdly, original contributions from individual Spanish planners, urban designers and architects have excited international interest and admiration.

Why is it, then, that a country with such an admirable background in terms of urban heritage, academics and practitioners has, so far, made only a limited impact on recent and contemporary international academic discourses surrounding urban form and, to date, has had such a small presence within ISUF? This paper attempts to answer two main questions. First, what factors explain this relative historical isolation from 'mainstream' urban morphology in the past? Secondly, to what extent has this changed in recent years? The paper will address the latter question in two main ways:

first, through a comprehensive review of the trajectory of development of Spanish urban morphology; secondly, through analysis of data on participation and research themes at the ISUF Conference in Valencia in 2017.

Whilst some may deny the relative insularity of Spanish urban morphology, the evidence in relation to ISUF is undeniable. Over the period 2008 to 2017 the number of individual Spanish core members (defined as members for more than one year) was only five (four having joined within the last year), compared to eleven based in Germany, seventeen in Italy and eleven in Portugal. In terms of institutional members (mainly university libraries), Spain had only one over the same period, whereas France had thirteen, Germany sixteen, Italy fourteen and Portugal eight. The data on attendance at ISUF Conferences over the period 2007 to 2016 (excluding the Valencia Conference for obvious reasons) tell a similar story, with the number of individual attendees exceeding two on only two occasions, 2014 in Porto (six) and 2015 in Rome (eight).

The contents of *Urban Morphology* from 1997 to 2017 reinforce the view that Spanish urban morphologists have been reluctant to present their work outside their own country or, at least, to a truly international audience. Only five papers have been published in *Urban Morphology* in this period with a specifically Spanish theme or topic and only five authors from Spanish educational institutions have published in this journal, three of them being co-authors of one paper. A common explanation for this sort of phenomenon relates to the dominance of English as the main language of international academic communication. Furthermore, academic insularity has been drawn attention to in relation to other groupings (Samuels, 2012; Whitehand, 2003, 2005, 2012). However, the demonstrably low level of participation in ISUF by Spanish urban morphologists is particularly worthy of exploration.

Examples of specific Spanish contributions

Despite this somewhat negative picture in relation to ISUF, it is emphatically the case that

Spanish academics and practitioners have in the past made fundamental contributions to the study of urban form, some of which have won international recognition. Foremost amongst these is the study of Islamic culture and urban form as exemplified in the work of Leopoldo Torres Balbás, including detailed studies of aspects of urban form such as plazas, shops, cemeteries, neighbourhoods and medinas (Torres Balbás, 1947, 1953, 1957). This work was collected together after his death in the two volume *Ciudades Hispanomusulmanas* (1970). Torres Balbás was himself building on earlier work, such as the cartographic reconstruction of the Islamic urban forms of Málaga (Guillen Robles, 1880) and Granada (Lucena, 1910). Similarly, the masterful account of the development of Spanish urban form by Garcia Bellido *et al.* (1956) equalled any equivalent contemporary publications in its attention to the morphological transformations experienced by Spanish cities over time. Over a decade later, Gutkind's (1967) English language study relied heavily on this text. Interest in the physical built form outcomes of planning also has a long history in Spain, with some legitimate claims that the country was the first in Europe to promote specific planning instruments, such as *ensanches* (planned extensions to the built-up area beyond the existing urban core) (Bassols Coma, 1996; López Trigal, 1999). On a wider scale, the academic and government adviser, F. Terán (1978) produced an influential text on the relationship between planning and urban form as experienced during the boom years of the 1960s and 1970s. The weight of academic and practical interest in urban form and planning is also indicated by the early publication and contents of specialist journals such as *Ciudad y Territorio*, first published in the 1970s and, although specifically concerned with town planning, the much earlier *La Ciudad Lineal*, first published in 1897 and claimed to be the first specialized planning journal in Europe (Mauro Rubio, 1997). Despite the long delay in achieving international recognition, equally significant were planning visionaries such as Arturo Soria (Velez, 1983) and Ildefonso Cerdá (Aibar and Bijker, 1997; Wynn, 1979). The latter's book

on Barcelona can lay claim to being one of the first to adopt a scientific approach to planning and urban design (Cerdá, 1867) as indicated by the title and demonstrated by the contents.

It is also the case that Spain was one of the first countries to apply academic studies of urban form to practical matters such as conservation (Ford, 1985). Torres Balbas was not only an academic but served as the architect-curator of the Alhambra Palace in Granada from 1923 to 1936 and was responsible for initiating most of its restoration from its nineteenth-century ruinous state, causing him to be named 'the father of the modern Alhambra'. He was also mainly responsible for the restoration of the Alcazaba, Málaga. A further historical example of applied conservation concerns the state-run *Paradores* chain of luxury hotels located mainly in adapted castles and other historic buildings. Although the first Parador opened in the Sierra de Gredos in 1928, the idea went back to 1910 when the government of José Canalejas sought to create a much-needed modern hotel infrastructure to provide accommodation for travellers and visitors. It also put decaying historic and architecturally important buildings to productive use, and improved Spain's cultural image abroad (Barke and Towner, 1996).

Spanish contributions to the study of urban form in the past (and practical applications of such study) are therefore not difficult to find if not always widely recognized. The relative absence of Spanish urban morphologists from international participation in the subject in the recent past therefore remains even more of a puzzle.

Why this relative isolation?

Given this rich heritage and interest in the built environment, what factors explain the relatively isolated character of Spanish urban morphology and students of urban form through most of the twentieth century? A major factor concerns the political isolation of Spain in the mid-twentieth century consequent upon the Franco rebellion and overthrow of an elected republican government,

and Spain's alignment with fascist Germany and Italy. Although Spain took no part in the Second World War its continuing fascist dictatorship led to post-war isolation. Slow integration into mainstream Europe was mainly initiated by the growth of mass tourism, but only with the death of Franco in 1975 and especially on joining the European Union (EU) in 1986 did full integration come about. EU membership started to act as a catalyst for looking outwards rather than inwards, in the academic sphere as in others. A whole generation of Spanish academics had been relatively isolated from mainstream European/North American academic dialogue and subject to considerable ideological pressure from the government (Shubert, 1990). It was largely young academics starting their careers in the 1980s who were exposed to wider international academic influences. Possibly for this reason no distinctive 'school' of urban morphology emerged in Spain, despite its historic urban environment and legacy of interest in the character and preservation of historic urban forms. Isolation from morphological ideas being formulated in the UK, Germany, France and, to a lesser extent, Italy meant that there were few international influences to test or follow, and this reinforced the tendency to look inwards.

Although there was no lack of studies related to urban form in this period, the 'tradition' that held sway in Spain for a long time was of detailed local studies (Walton, 2003). These usually followed a set pattern, being almost entirely parochial in content. For example, the urban studies of Almeria published in 1989 (Lara Valle, 1989) and Ronda (Miró, 1987), both had clear morphological content but were based on a descriptive paradigm seeking to explain chronologically the growth of certain elements/components of urban form. A further factor that was important in driving studies in this local/regional direction was the practical matter of financing publications. It became very common in Spain from the 1950s onwards for academic publications to be funded from local sources, such as local *Cajas de Ahorros* (savings banks) and *Ayuntamientos* (town halls), on a scale much

larger than in the UK for example. A supporting functional explanation relates to the proliferation of serious local and regional academic journals providing outlets for publication by Spanish researchers. There is no equivalent of these in the UK, for example. There local and regional historical and archaeological journals exist, but local history journals are often the domain of interested amateurs, and the more academic of such journals tend to be quite specific and limited to one per county. By contrast, in the field of historical urban studies in the Málaga region alone, there are at least five academic journals providing potential outlets for serious academic research: *Baetica*; *Gibraltar*; *Isla de Arriaran*; *Jabega*; and *Estudios de Bellas Artes*.

In part this relates to the significance of Spanish regionalism which was strengthened with the development of regional autonomy, first enshrined in the Constitution of 1978. After the hiatus of the Franco dictatorship, more recent political trends have arguably reinforced an older tradition, one that relates to the endeavour for Spain to rediscover itself through its regions. This stemmed from the years of crisis in national identity and the final loss of Empire. In Spanish universities much intellectual argument was devoted to the need to 'rediscover ourselves'. There was a feeling that the 'centre' had failed in the later-nineteenth century, so it was necessary to find the pathway to progress through the regions and their identities (Shaw, 1975). Inevitably, this again reinforced a somewhat inward looking, self-reliant intellectual tradition rather than one that openly embraced others or even looked to others for inspiration.

The intellectual environment of twentieth-century Spanish universities has also played a role in this insularity, being characterized by a roller-coaster relationship between the state and the universities. Until the nineteenth century, the few but highly prestigious Spanish universities had enjoyed considerable autonomy (De Madariaga, 1942). But, in the course of that century, the state increased its control, resulting in universities becoming 'mere government establishments for the granting of official diplomas' (p. 81). A radical, but all too

brief, response to this deadening environment came about with the formation of the *Junta para Ampliación de Estudios*, which actively encouraged international contact. This came to an abrupt halt with the Civil War and dictatorship and the strict control of staff and syllabuses by the Franco regime (Hooper, 1995). From the mid-twentieth century, the number of universities grew rapidly but this led, at least initially, to problems of quality and a reinforcement of 'localism' with, amongst other things, the vast majority of students being steered towards their nearest university. One authority observed 'the legacy of Francoism was a mass university, adrift and with no sense of purpose' (Carr, 1980, p. 161). In the last 3 decades, however, there has been a major change in the general character of Spanish universities. On joining the EU, Spain clearly sought to become a part of modern Europe, with universities being enthusiastic partners in ERASMUS programmes, for example. But, it is only in the last generation that many aspects of an embedded intellectual heritage have begun to be broken down.

Reviewing the content of Spanish urban morphology

In his review of the history of the study of urban form in Spain up to the 1990s, Vilagrasa (1998) drew attention to the impact of international influences. Ostensibly, this would appear to contradict the assertion that urban morphology in Spain was 'isolated'. But Vilagrasa notes the wide influence of French intellectuals on the development of 'urbanistic thought' in Spain at different periods. For example, there was the influence of Raoul Blanchard (1922) on the early development of urban geography within the wider geography curriculum and, in the 1970s, the growth of theoretical frameworks derived from French urban sociology. Emphasis was on agents rather than morphological features, leading to the growth of similar studies. However, these are broader intellectual trends from outside mainstream urban morphology and urban geography and Spain appears to have

remained relatively closed to more specific influences. Indeed, Vilagrassa himself noted that 'although the word 'morphology' is used profusely, morphological analysis is once again, a relatively peripheral element' (p. 40). Thus, there is an important difference between such French influences and the development of Spain's own school of urban morphology based on distinctive characteristics and proselytized on the world stage. Despite there being many studies, especially by geographers, they took the form of town monographs, examined within a set format, based on French geographical thought. Morphological aspects were included in a descriptive way (for example, Bosque Maurel, 1962 on Granada) but not in great depth and with no attempt to apply general morphological theory to individual cases. 'Much attention was paid to urban form but under the constraint of a rigid scheme that included questions that were of little interest to morphology' (p. 38). In this study of one of Spain's most distinctive and internationally recognized cities, only 42 pages out of about 300 were devoted to morphology. Other geographical studies that were also ostensibly concerned with morphology were, in effect, diluted through a system that required attention to other aspects. For example, Terán's (1961) analysis of two streets in Madrid examines plot forms and building types but within the framework of social and functional contrasts rather than morphology per se.

In the later 1970s, conceptual and methodological changes in Spanish geography related partly to political change and the greater opening up of Spain and Spanish academic institutions to external influences. There was more work on planning history and the socio-political context of this (see, for example, Ruiz, 1976). With the growth of a freer intellectual climate, the subject matter of studies changed. This was typified by Capel's famous *Capitalismo y morfología urbana en España* (1975), whose theoretical framework derived from French urban sociology and emphasized agents rather than morphological features. Therefore, despite the title, there is little direct morphological analysis. During the later 1970s some exceptions were apparent,

however, with architects and architectural historians leading the way in analysing the built form of residential development during Franco's dictatorship (Solá, 1976). The rapid urban expansion of the 1960s and 1970s also stimulated typological studies of architecture: for example, Valenzuela (1974) and Mas (1979) on house types, and Linazasoro (1978) following the Italian typo-morphological approach in his study of the medieval centre of Vitoria.

Since the 1980s there has been much internal change in Spanish cities, and this has prompted academics to give more attention to urban form and, in the opinion of Vilagrassa (1990), apply concepts developed elsewhere. This has included the study of fringe belts, the relationship between agents of morphological change and changing architectural styles (Mas, 1996; Vilagrassa, 1992), and themes such as the characteristics of urban property ownership and the formation of urban layouts in Madrid (Canosa and Rodriguez, 1985; Mas and Mata, 1991). A further dimension was added with the expansion of interest in cultural heritage, urban form and conservation (partly a response to the increasingly negative consequences of mass tourism) and a shift of focus from individual buildings to more general features – for example city walls and the entirety of historic areas (Ganau, 1996).

Recent change?

It could be argued that the recent development of urban morphology in Spain is marked by sporadic contributions rather than the growth of a coherent school of thought or a generally accepted paradigm to act as a framework for analysis. However, it is possible to detect different groups and disciplines with an interest in the study of urban form and this is probably one reason for the widely ranging character of the output. For example, urban historians (including some architectural historians) have made important contributions. So too have urban designers and planners, but their concerns are very different from those of historians, with a focus on a more 'technical'

approach to urban morphology. More recently, scholars with an 'environmentalist' agenda have emerged but in many cases urban morphology itself is not the main driver of such studies. It is used more as a classificatory tool.

Two overviews that demonstrate this variety of approaches are the examination of changing approaches to the study of urban form through a planning perspective by Monclús (1992), and the review of the development of urban morphology within the wider field of geographical thought by Bielza de Ory (2011). The latter notes that interest in this field of study in the twentieth century was based mainly on the 'landscape' approach, which was later eclipsed by the emergence of 'New Geography' with its focus on spatial analysis, quantification and economic themes and, later, concern with structural issues. In his view, the re-awakening of interest in landscape studies from the 1980s onwards, especially in historic urban centres, and the growth of multidisciplinary work, have stimulated greater interest in urban morphology in Spain. There is much truth in this claim and a typical example is González Pérez and Lois González's study (2010) of the changing structure of the contemporary Spanish city centre in the context of globalization and post-modern influences.

Whilst Spanish studies of some morphological elements, such as fringe belts, remain very few (see Vilagrasa Ibarz, 1990 for an exception), other components have received detailed attention. For example, there is the examination by Corominas I Cano (1999) of the impact of town walls on urban form and change in the small Catalan town of Ulldecona, the study by Herrero Colás (1997) of several abortive 'reform' projects within the traditional centre of Valencia, and those by Barke and Mowl of 'interior reform' in Málaga's urban core (2013), and by Barke (2011) of a traditional form of Andalusian working-class housing. However, elsewhere, whilst terms such as 'typology' occur relatively frequently, it is not always clear that the full implications of that term have been fully understood. For example, a recent study of 'urban-residential typologies' on the coast of Alicante (Morote

Siguido, 2014) turns out to be based almost solely on densities.

The significance of landscape regions for conservation policies has not escaped the attention of researchers on Spanish urban form, but such studies have taken different directions. For example, Barke's (2003) account of landscape regions within the town of Antequera takes a traditional approach, based largely on building form whereas Hermsilla *et al.* (2012) adopted a much more technical method using the hierarchy of buildings, plots and urban blocks to produce a typology of areas.

Contributions from planning history include the study of the role of agents of change by Sánchez de Juan (2001) particularly the impact of the development of the training of nineteenth-century Spanish architects and engineers through the *Escuela de Ingenieros de Caminos, Canales y Puertos*, established in 1802. A specific local illustration of this ideology is provided by Acale Sánchez in his study of Puerto de Santa María (2004). On a larger scale, Sambricio's (1992) account of the influence of external planning concepts on the application of Soria's 1894 project in Madrid provides an exemplary account of the relationship of planning concepts to the evolution of urban form.

Spanish urban scholars also turned their attention to the role of specific events or initiatives in acting as agents of change in urban form. An early example was Espuche *et al.*'s study (1991) of the 1888 world's fair in Barcelona, an event ostensibly used to assist in restructuring the city but whose role was propagandist rather than bringing about any significant structural change. Much wider ranging was the role of railways in influencing Barcelona's urban form in the later-nineteenth century (Gonzalez, 2005).

Interestingly, Spanish urban histories often have a strong morphological component. For example, the introduction to *Málaga: Guía de Arquitectura* (Candau *et al.*, 2005) provides a comprehensive guide to the historical evolution of the spatial structure of the city. The comprehensive urban history of Galicia (Villares Paz, 1988) contains several essays, either specifically concerned with

morphology or related to it, for example the account of Pontevedra (Méndez Martínez, 1988). However, despite the thoroughness displayed and the enlightenment provided, several of the essays are not dissimilar to their equivalents published in the 1960s in that they lack any relationship to wider bodies of theory or knowledge.

Nevertheless, the continuing, genuine interest in the study of changing urban form is witnessed by the publication of a series of texts, often based mainly on interpreting cartographic sources. Foremost amongst these are Guardia *et al.*'s magnificent *Atlas histórico de ciudades europeas: Península Ibérica* (1994), essentially a study of morphological periods in the major cities of the Iberian peninsula and warmly reviewed by Larkham (1993), Pinto Crespo and Madrazo Madrazo's two volume *Madrid: atlas histórico de la ciudad* (1995, 2001) and Isaac's sumptuously illustrated *Historia Urbana de Granada* (2007).

The relationship between urban design and urban morphology received a significant boost in Spain towards the end of the millennium through several imminent large-scale events and the opportunity these provided for significant intervention in the built environment of cities such as Bilbao (Gospodini, 2001; Plaza, 1999) and Barcelona (García-Ramón and Albet, 2001; Monclús, 2003). It is no exaggeration to claim that a new generation of architects, planners and urban designers were inspired by this final confirmation that Spain had at last re-appeared on the world stage as part of the international network and that urban transformation was seen as a central component of any strategy. But the concern was with the wider field of modern (or post-modern) urban design rather than with urban morphology per se.

Whilst mainly concerned with literature on the city, Cordoba and Garcia-Donoso's study of *The sacred and modernity in urban Spain* (2016) offers the intriguing argument that the country's peripheral geographical position within Europe has influenced its complex relationship to the concept of modernity and secular change and this is evident, for example, in attitudes to the built environment.

To empirically investigate the current character of academic studies on urban form in Spain an on-line search was carried out for articles in Spanish published since 2000 with the words *morfología urbana* or *forma urbana* in the title or abstract.

Several distinctive themes emerged. First, there is clearly considerable interest in the application of space syntax methods and other aspects of mathematical analysis to aspects of urban form (Ariza-Villaverde *et al.*, 2013; Cámara and López, 2000; Yoo and Lel, 2017). A promising area of morphological analysis is concerned with urban fabric analysis, for example Colaninno *et al.* (2011) on the form and compactness of homogeneous morphological structures in Barcelona. However, the purpose of some of this work is not always apparent. Various components of the urban structure are classified in a sophisticated manner but the relevance to, for example, policy guidelines or implementation is sometimes absent.

Morphological analysis has been applied to the problems of urban growth and the emergence of polycentric and/or metropolitan urban structures, as evidenced by Burns *et al.* (2007) on the growth of built up areas of Madrid and Barcelona, Valdunciel (2016) on Girona, Sánchez-Mateos *et al.* (2014) on road accessibility and on the social context of the changing form of Barcelona (Dura-Guimera, 2003). In addition, recent years have seen a number of morphological studies in which environmental issues and sustainability have provided the context: for example, Morote and Hernandez (2016) on the effects of urban sprawl on water demand, and Montávez *et al.* (2000) and Gago *et al.* (2013) on the relationship between urban form and urban heat islands. Other studies, such as Oliver-Solà *et al.* (2011), have examined the impact of urban form on local temperatures and how urban design can be used to modify energy consumption. Garido-Jiménez *et al.* (2017) have also examined the relationship between aspects of urban form and energy. On a broader scale, Salat and Vialan (2010) have revisited the sustainability dimension of medieval urban design in Toledo.

It was also revealed that, in many studies, urban morphology and typomorphology were used as classificatory tools upon which further studies may be based. This reinforced Vilagrassa's (1991) observation that the study of urban form in Spain was implicit in many publications but not central to their purpose. Perhaps this is not surprising, and part of the problem concerns the looseness with which the terms 'urban form' and especially, 'urban morphology', are used, which is not a failing unique to Spain.

Despite this evidence of a considerable amount of published work, the status of urban morphology within academic urban studies in Spain has caused some concern. For example, a recently published article on urban morphology within the curriculum of all 33 schools of architecture in Spain (Ruiz-Apilánez *et al.*, 2015) concluded that 'architectural schools in Spain offer quite a modest urban morphology curriculum' (p. 147). Their detailed analysis showed that the presence of urban studies modules within the curriculum was very low and the average architectural programme in Spain contains only about 5 per cent of the total credits in urban morphology. The analysis also concluded that there was not a well-established bibliography of urban morphology in Spanish academia and very little awareness of contributions from outside Spain. In considering the overall state of research in urban morphology, the authors comment that it 'is frequently focused on particular cases and is largely carried out by researchers or research groups with low levels of interaction between different disciplines and institutions' (p. 154). From this it would appear that Spanish urban morphology is still characterized by relative insularity, both externally and also within the country.

The ISUF Valencia Conference 2017

The occasion of ISUF's Conference held at the Polytechnic University of Valencia provided an opportunity to assess the current standing and role of the subject within Spain. Important indicators are the level of participation and the nature of the contributions in terms of content. The *Book of Abstracts* (Colomer *et al.*, 2017) provides appropriate data for such an assessment. Table 1 shows a healthy level of participation by Spanish presenters at Valencia with no significant difference from the 'native' participants at other recent European Conferences, at Porto and Rome. One might expect a focus of research interests on 'domestic' locations and, of the 346 abstracts provided in this booklet, just over one fifth (70) were concerned with Spanish urban settlements. But this is no more 'insular' than the equivalent figures from Porto and Rome.

Also of interest is the participation rate of Spanish scholars from outside the city/universities of Valencia itself. One may anticipate a high level of participation from a host university and host city (101 in total) but how many urban scholars from elsewhere in Spain felt it worthwhile or of interest to their own studies to come and offer a paper at this international conference? An additional 87 Spanish participants were present (46 per cent of Spanish author participants, and 12.5 per cent of total author participants). 52 of these were based in either Madrid (24) or Catalonia and the Levante (28). If we take away the capital and the eastern regions, the participation from the rest of Spain, as measured by named authors of accepted papers, is only 35 individuals. Nevertheless, these figures broadly reflect the distribution of the Spanish population,

Table 1. Comparison of 'Native' authors and locale of study, Valencia, 2017, Rome, 2015, Porto 2014

Conference	Percentage of authors		Percentage of settlement studies	
	'Native'	Non-native	'Native'	Non-native
Valencia 2017	26.3	73.7	20.2	79.8
Rome 2015	30.5	69.5	19.0	81.0
Porto 2014	22.7	77.3	21.9	78.1

settlement and academic institutions and suggest a level of participation equivalent to other recent ISUF conferences.

The nature of contributions is also of interest. Which morphological features have excited most academic interest from Spanish researchers? Though it is often difficult to categorize the precise nature of the contribution from the abstract of a paper, and the language used may obscure some aspects and meanings, it should be readily apparent within a summary just what key elements, components or themes have been studied. Table 2 categorises these and compares the Spanish contribution to 'non-native' contributions in terms of themes. It should be noted that a study may be concerned with more than one morphological component and such multiple themes are included in Table 2.

It is clear that the Spanish contributions are widespread across the topical spectrum but so too are those from other participants. Nevertheless, there are not many studies by Spanish participants concerned with the 'classical' detailed morphological elements of

urban form such as typology, plot structure, street system, fringe belts and urban tissue – only 13.9 per cent compared to the 29.9 per cent of other participants. Many Spanish presentations were concerned with very general morphological topics rather than with the detailed analysis of morphological components. As with the term urban morphology, 'typology' or 'typomorphology' occur relatively frequently but the number of studies of specific 'types' of building fabric and of actual typological processes was extremely limited. When the general terms 'urban morphology' or 'typomorphology' were used, they were often presented as a classificatory tool (sometimes rather vaguely or extremely generally, for example, 'high density mass housing' or 'low density suburban middle-class housing') upon which some further analysis was based, for example, energy characteristics or sustainability analysis. Of course, the Spanish participants were not alone in this. Similarly, there is an overall paucity of focused studies of the agents of change and transformation of contemporary urban forms.

Table 2. Morphological elements, components and themes in studies by Spanish participants and other participants, ISUF Conference, Valencia 2017

Element, component or theme	Spanish contributions		Other contributions	
	Number	%	Number	%
Typology/typomorphology	11	7.3	31	10.3
Urban tissue	2	1.3	28	9.3
Plots/plot analysis	3	2.0	14	4.6
Urban periphery	12	8.0	3	1.0
Fringe belts	0	0	5	1.7
Plans and planning - historical	12	8.0	8	2.7
Plans and planning – modern/contemporary	5	3.3	16	5.3
Housing/residential developments	11	7.3	23	7.6
Urban design	4	2.7	9	3.0
Architecture/buildings	11	7.3	14	5.0
Public space/green space	13	2.7	31	10.3
Internal reform/central areas	8	5.3	7	2.3
Land use	10	6.7	6	2.0
Street pattern	5	3.3	12	4.0
Regeneration/rehabilitation/gentrification	11	7.3	27	9.0
Space syntax	4	2.7	6	2.0
Sustainability/energy etc.	11	7.3	29	9.6
Landscape/townscape assessment/perception	15	10.0	20	6.6
Transport	2	1.3	12	4.0

Conclusion

What does all this tell us about the current state and status of urban morphology in Spain? For much of its recent history, Spanish urban morphology could be likened, somewhat ironically, to the concept of *ciudad del interior*—that is the idea of a provincial backwater isolated from currents of change that was effectively utilized by Antonio Rivera Blanco in his study of Vitoria (1992). However, we can conclude that contemporary Spanish urban morphology is not isolated as ISUF Valencia 2017 indicates. Nevertheless, the growth of interest in urban morphology in Spain is characterized by sporadic contributions rather than the growth of a coherent school of thought or a generally accepted paradigm that has acted as a framework. As elsewhere, there appears to be some uncertainty about the interpretations offered by different schools of thought in urban morphology. Urban morphology should be about the analysis of morphogenetic processes and what Kropf (2013) has described as the ‘formal characteristics of the elements of urban form’ (p. 130). There is a difference between this and the much wider (although valuable) perspective in which it is argued that the content of urban morphology is about *everything* to do with the form and character of cities. ‘Spanish’ urban morphology tends to feature the latter rather than the former. The main issue appears to be the lack of an overarching conceptual framework, applicable to the Spanish case, against which individual cases and processes can be tested. Whilst Ford (1985) has proposed a structural model of Spanish urban form, this is in only general, descriptive terms and lacks the conceptual depth required for robust analysis. The lack of a distinctive methodological ‘toolkit’ is also self-evident.

Very recent output indicates a considerable interest in the practical outcomes of urban morphological research, with urban morphology being used as a ‘tool’ rather than an end in itself. But perhaps we should ask if this is a problem? Indeed, to move away from the rather insular concern with the distinctive character of Spanish urban morphology, perhaps

what has been revealed by this review poses a challenge for the entire discipline of urban morphology. Its concern with minute detail and the complexity of some of its approaches and terminology may be perceived by many as being rather arcane in the modern world. Perhaps the diversity of approaches and studies demonstrated in Spain points the way to a more practical and ‘useful’ future.

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