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Vernacular architecture in the south of Portugal: The history of Mértola's houses from a rural to an urban landscape

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Abstract
This article deals with permanence and change in the traditional architecture of southern Portugal, adopting the town and landscape of Mértola as a case study. This research conveys how the relationship between the vernacular architecture, the territory and the site is not immune to the course of history, reflecting a profound change in the ways of living over time. In methodological terms, the research focuses on surveying and characterizing architectural diversity in both the rural context (with the definition of various landscape subunits) and the urban context (delimiting the various urban subunits). This concludes that the architectural specificity, in both contexts, is subordinate to the same processes of historical change which nevertheless acquire a circumstantial dimension. These processes include the readable influences of models and ways of living arriving from abroad and contemplate: the transition of the courtyard house from the Islamic medieval period to the compact house of the Christian medieval and modern periods; the consolidation, diversification and ennobling of different housing types during the *Ancien Régime*; and the profound transformations of domestic architecture following the advent of Liberalism.

1. Introduction

The town of Mértola, in southeast Portugal (Figure 1), represents an interesting case study for reading the importance of the physical territory to the morphology of traditional architecture. From its first settlement, this town has been located, on a promontory with pronounced slopes leading down to the Guadiana and Oeiras rivers. The uniqueness of this site has been described through the ways in which the vernacular building models itself on its surroundings even while based on different architectural solutions: the cut-out perimeters of the buildings and the public spaces so as to adapt to the steep slopes (Keil do Amaral et al., 1962: 238); the layout of buildings with each compartment located at different heights (Agostini & Vannetiello, 1999: 274); access to housing from different levels and the presence of rock outcrops inside the rooms (Varanda, 2002: 212).

In any case, most studies on Portuguese vernacular architecture tend to privilege the analysis of the rural over the urban models. In the case of Mértola, the most important research on the town's built heritage falls within the scope of its religious and military monumental heritage and, especially, the field of archaeology, with the excavation of an Islamic quarter, dating to the Almohad period (twelfth and thirteenth centuries), with nineteen houses thus far excavated, holding special relevance (Gómez Martínez, 2014).

At this level, Mértola provides a model case of applied research in which scientific knowledge has significantly contributed towards local development, in a region otherwise marked by a significant process of depopulation, through the musealization of the different expressions of material and immaterial heritage (Torres, 2014a; Espino Hidalgo, 2020). As a consequence of this work, the town has recently been included on the Indicative List of Portugal for applications to Unesco World Heritage status (Portuguese National Commission for Unesco, 2018).

However, one of the major gaps existing in the knowledge on Mértola's heritage stemmed precisely from urbanism and its housing architecture. Hence, with this framework in mind, a

Figure 1. Location of Mértola in the context of the southwest Iberian Peninsula. A – Alentejo region; B – Mértola and its municipality.

study of the domestic architecture was first outlined in 2013 with the specific aim of deploying scientific research in the service of heritage dissemination and its conservation (Costa, 2015). In methodological terms, this research project acquired an interdisciplinary dimension, combining fieldwork and an exhaustive survey of Mértola's dwellings, with the interpretation of archival sources coupled with archaeological research.

This article develops the themes of that project as regards the relationships between the house, the site and the territory.[1] Based on this core goal, and considering analysis of the different housing typologies, we proceed to answer the following questions: What are the most common architectural solutions for adapting the house to the site?; Are these solutions the same in the different subunits across the landscape and in the town's different areas or are we able to reconstitute a diatopic diversity?; Does the construction and transformation of housing architecture include identical solutions for implementation throughout history or are we again able to reconstitute a diachronic diversity?; Is there, at this level, a specificity of the town and of the urban space in relation to rural architecture?

To this end, the first section briefly defines the scope of the various landscape subunits in this area of study alongside the identification of the various typologies of vernacular architec-

ture found in each case. Next, in the second section, we shift from the rural to the urban context, taking into consideration the delimitation of the various urban subunits of Mértola and the description of the different typologies of domestic architecture present in the town. Subsequently, the third section sets out a discussion of the results before attempting to answer the research questions raised above, recognizing the importance of this territory according to the specific characteristics of its vernacular architecture in both the rural and the urban contexts and then finally depicting the patterns of their transformation over the course of history.

2. Vernacular architecture in the historic rural landscape of Mértola

The level of importance of Mértola has changed in cycles throughout history. In its golden periods, this site was a key point of passage between distant territories: a privileged location amidst two worlds and the interconnection between the river and land routes, linking the Mediterranean with the Atlantic. On an intermediate scale, Mértola also represents the transition between very different Portuguese territories, from the Alentejo peneplain to the Algarve

Figure 2. Settlement and rural landscape subunits in the municipality of Mértola. A – Mértola; B – Minas de São Domingos; C – Pomarão; RL1/RL2/RL3/RL4 – rural landscape subunits.

mountain range and beyond, to the Lower Algarve. In its times of hardship, with decreased commerce and greater isolation, Mértola's strengths stemmed from its connection with the nearby rugged landscape, hierarchically linking a system of rural settlements and focusing on internal production.

Mértola's landscape, belonging to south-western Iberia, falls into the dry-Mediterranean category (Lautensach, 1988: 363-7). In overall terms, the region displays significant landscape diversity, including different yet complementary means of production in the diverse geographical (sub)units. The territory is also shaped by its relative diversity, comprising of low level mountain ranges in the southern areas and the left bank of the Guadiana, with the plain and its fields extending westward in addition to the banks of the river course.

2.1. The rural landscape subunits

The broad and clear diversity in the biophysical characteristics of the territory reflects in the historical models of landscape construction, with repercussions for settlement, property structures and traditional architecture that require consideration across different scales (Caniggia & Maffei, 2001). The delimitation of several landscape subunits (Ribeiro, 1998; Cancela d´Abreu et al., 2004) within Mértola is, as we set out below, fundamental to any interpretation of the diversity of its rural architecture (Figure 2).

The first subunit corresponds to the southern strip of the municipality of Mértola (RL1), which integrates this mountain region of low level schist and greywacke peaks, bordering Portugal's two southern provinces: Alentejo and Algarve. The importance of surface drainage due to the impermeability of these rocks resulted in a very rugged orography poorly adapted to agriculture. In historical terms, written sources record an economy of subsistence (Stanislawski, 1963: 197-199), with irrigated crops restricting to narrow valleys and leaving the slopes to non-irrigated cereal crops (first itinerant and then in rotation) and grazing lands for small cattle or as scrubland (associated with complementary activities such as

bee-keeping and charcoal production). For all the reasons pointed out above, the settlement of this subunit displays very little hierarchy, restricted to a dense pattern of small villages inter-linked with an extremely compartmentalized rural property structure.

A second subunit of this landscape corresponds to the moderately rugged region of the north-eastern area of the municipality on the left bank of the river Guadiana, which constitutes the former Common lands of the Mértola and Serpa mountain ranges (RL2), characterized by their preponderance of holm oak and cork oak forests. Although this area displays certain analogies, from the physiographic point of view, with the first subunit described, this represents a more circumscribed region, with its settlement resulting from the division of communal lands undertaken by the Portuguese state in the mid-1920s (Cf. Silbert, 1978: 425) that produced small, quadrangular plots, in some cases punctuated by the presence of isolated houses.

A third subunit corresponds to the Guadiana river valley with its deep profile and correspondingly sloping banks running across the study area from north to south (RL3). Unlike further downstream, where the valley widens to provide important agricultural lands, the irrigated crops here were restricted to a few well-defined vegetable gardens. Thus, the settlements along the river banks interrelate with the traditional road system not only because of the importance of the Guadiana as a transport thoroughfare connecting to the Mediterranean Sea (longitudinal axis) but also due to the former presence of vessels that provided continuity to the land routes on either bank of the river (transversal axes) (Silva, 2006; Garcia, 2018).

While also characterized by the schist and greywacke soils of the Ancient Massif, the fourth subunit (RL4) stands out according to its flatter relief and only gently undulating (corresponding to the characteristic Alentejo peneplain extending to the west and north). However, we are able to register some landscape heterogeneity here, both in terms of the arboreal substrate (different patterns of forested pasture-land and open areas), and of hierarchical settlement (scattered buildings and settlements of differing scales). These settlements associate with very considerable contrasts in their property structures, which distinguish the very compartmentalized areas around the villages from the latifundium punctuated only by isolated farm buildings (Feio, 1993). This subunit generally coincides with the right bank of the Guadiana River, although its characteristics also feature strongly in some well-defined stretches on the left bank.

2.2. Historical diversity in the rural architecture of the different landscape subunits

The physiographic diversity of the territory of Mértola is fundamental to understanding the history of settlement associated with each different architectural typology (Costa, 2010: 104-9). The region's oldest standing rural settlements correspond to small villages with only a few units or several dozen houses, which sometimes get reference during the transition from the late medieval to the early modern period and are often located in the vicinity of archaeological sites that date back to the medieval Islamic period (Macias, 2005: 297). The consolidation of this land occupation model involved slow demographic growth and a process of concentration that characterized the region throughout a period that extends from the *Ancien Régime* to the early second half of the last century.

Surveys of these settlements reveal the preponderant influence of cell com-

**Figure 3.** *Almoinha Velha village.*

positions evident in most of the buildings. The basic building unit thus does not correspond to the dwelling as a whole but rather to each of its compartments. Rural settlements thus acquire a morphology defined by the proximity of several buildings of inconstant sizes and irregular perimeters, organized around the successive addition of compartments from the centre outwards (Figure 3). Over the course of time, the transformation of the domestic architecture very often resulted in buildings consisting of compartments for different family groups and, simultaneously, in dwellings with their compartments dispersed across different buildings.

For economic reasons, among others, the pre-existing walls were, whenever possible, reused for defining the perimeters of new building cells, thus favouring the expansion of existing edifices rather than constructing separate new buildings. When circumstances did allow, these buildings might acquire over two dozen rooms which would then in many cases correspond to several dwellings and farm annexes.

These larger buildings, found in the centre of many rural hamlets, are structured around a central alignment of gabled constructions with a ridge beam that would subsequently discipline the later additions of mo-

no-pitched roofs (type R1). This morphology corresponded to an implantation over ridges and the posterior transversal enlargements along slopes (Figure 4-1). The trend in most rural settlements is for the front door to face either eastwards or to the southeast. This ensured a very flexible system of house organization and, while each space was markedly independent, they could also be combined in many different ways through the opening and closing of doors (using stone masonry or adobe), inside the house, whenever occasions favoured sharing or enclosure.

Around these larger building complexes – or in villages where absent – we encounter smaller buildings, consisting exclusively of elementary mono-pitched roof constructions (type R2). This type is suitable to sloping locations through spanning several levels of interior flooring and incorporating steps to connect the various compartments. At the morphological level, this combines an almost always irregular external perimeter with a complex roof, resulting from the gradual enlargement process. These building typologies predominate in the oldest rural settlements of Mértola territory, mainly occurring in the landscape subunits RL1 and RL4. Furthermore, the study revealed two distinguishing aspects of these settlements in the aforementioned two subunits, reflecting the different prevailing conditions at the level of both the physical territory and the historical process of occupation. In the municipality's southern sub-regions (RL1), the more rugged orography and sparser areas agriculturally productive land resulted in: on the one hand, settlements that are on average smaller in size than the Alentejo Peneplain (RL4); and, on the other hand, in poorer and less diversified architecture associated with a much more compartmentalized property structure and the far lower level of any presence of large scale rural estate owners. Regarding the load-bearing walls, these architectures gradually transitioned from using shale masonry in the county's southern mountains (RL1) to the rammed-earth construction, predominant in the central and northern hills (RL2 and RL4).
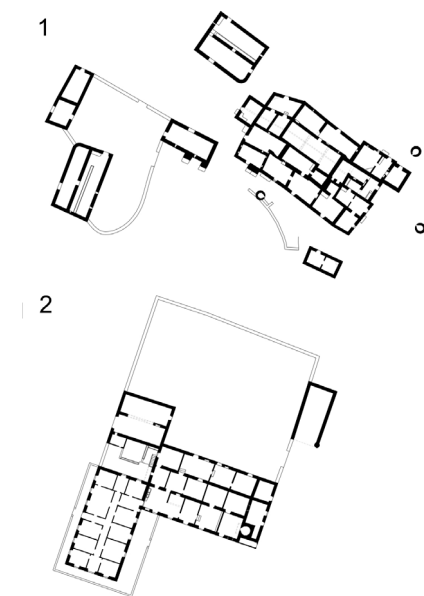
Figure 4. Almoinha Velha. 1 – Old settlement; 2 – Farmer´s new house (1930s).

The transformation of Mértola's rural architecture progressively replaced the cumulative construction process described above, with more serial and rational principles for organizing domestic architecture, which came to the fore following the end of the *Ancien Régime* and especially from the third quarter of the nineteenth century (Figure 4-2). One of the landmarks in this transformation relates to the gradual preponderance of a rectangular boundary plan almost always associated with a gabled roof. Although this morphology already featured in the constructions of earlier periods, especially for the homes of larger landowners, it was henceforth that it gradually became taken into consideration even in vernacular rural settlements.

In most cases, the new dwellings were built in a position separate to the pre-existing constructions, which itself represents a break with the already established building practices. Regarding the choice of site for these new houses, the decision was to prioritize flatter sites or to advance with larger terracing works, with the corresponding objective of eliminating the previously recurrent steps for connecting the different compartments making up dwellings. In other words, the search turned to flattened areas of land positioned far from the other constructions and correspondingly better aligned with the emergence of a progressively more individualizing culture, renouncing the contiguous expansion of pre-existing buildings, which had incorporated more collective systems of organization.

In a first phase, which we may refer to as a transition, there are no major transformations in the constructive processes, maintaining a clear preponderance of rammed earth and stone load-bearing walls combined with more indefinite ways of enacting the new principles for organizing space (type R3). With the end of the nineteenth century approaching, the establishing and crystallization of this new model was accompanied by the construction processes through the integration of more serial systems (type R4), both in terms of the roof frame and the use of light, not structural

walls for the compartmentalization of internal spaces, in some cases associated with the emergence of the corridor as a distribution space.

In addition to contributing to the expansion of the already existing settlements in subunits RL1 and RL4 throughout a period that extended into the second half of the twentieth century, this typology was also relevant to the dispersed settlements in subunit RL2 that resulted from the parcelling of the former common land of the Mértola and Serpa mountains as mentioned above. It is interesting to note that the trend to orient the main façade of the housing towards the east or southeast – a characteristic of the oldest buildings in the settlements in the prior RL1 and RL4 subunits – also persists here. Similarly, the new housing organization models also hold a decisive influence over the change in settlement organization resulting from the new cycle of operation of the São Domingos mines from 1858 onwards (Custódio, 2018).

This underlies the popular gabled roof dwellings of the mining village of São Domingos (even if here arranged in continuous alignments of dwellings), or the mono-pitched roofs dwellings of the mining port of Pomarão (where this type of roof was more adjusted to construction on slopes). In this regard, we should however note that, until the establishing of the mining port of Pomarão, the river banks (subunit RL3) in the municipality of Mértola were characterized, by their near absence of vernacular settlements. As we shall return to, this also emphasizes the exceptional importance that the village of Mértola has in the relationship with the river for its history of rural settlement organization.

3. Vernacular architecture in the historic urban landscape of Mértola

The town of Mértola occupies a spur on the right bank of the Guadiana River, near the mouth of a tributary (Oeiras brook). It is a typical example of a promontory settlement, with its characteristic fusiform shape, related to a first stage of occupation in the context of the ridge path system (Cf. Cataldi, 1977: 114). Settlement on this site dates back to at least the Iron Age and stems from

the importance of the Guadiana river as a link to the Mediterranean (Figure 5). The site coincides with the limit of the river's navigability (with the conditions for mooring for transfer between river and land transport routes) while benefiting from geographic characteristics that facilitated its defence.

The successive rebuilding of the castle (perched on the peak of the spur) and the defensive wall (in alignment with the prevailing physiographic contours) from the Islamic medieval period onwards (Boiça et al., 2014) established the settlement's boundaries in periods

*Figure 5. Aerial view over the landscape of Mértola and the Guadiana River (Source: Virgilio Lopes).*

Figure 6. The landscape of Mértola and the different urban subunits. A – Old Town (Vila Velha); B – Urban expansion beyond the wall (Arrabalde da Vila); C – Left bank settlements (Além Rio); D – Convent of Saint Francis; UL1/UL2/UL3/UL4/UL5 – urban landscape subunits.

of greater insecurity; whether before the Christian reconquest, or later with the formation and conflict over the border between the Christian kingdoms of Portugal, Leon and Castile (twelfth and thirteenth centuries). In any case, in the particular case of Mértola, the border with Spain does not coincide with the course of the river but rather crossing this territory about fifteen kilometres to the east. Thus, the ongoing relationship with the left bank of the Guadiana also shaped the town's urban development, contributing to the diversity of urban subunits that we need to appropriately define within its perimeter (Figure 6).

3.1. The urban landscape subunits

Construction over this very rugged orography area ranks among the different biophysical conditions that shaped and conditioned the urban evolution of Mértola. Even within the city walls, there are significant differences in elevation, resulting in pronounced undulations in the streets running lengthwise and especially in the cross streets that, in some cases, incorporate flights of stairs between the different adjoining levels (Figure 7).[2]

Indeed, this morphology comprises two distinct urban landscape subunits (UL) that interrelate not only with the topography but also with the historical importance of the approach to the river and its port. In fact, the lowest subunit (UL1) is structured by the road that arrives from the hinterland, crosses through the wall passing between its two main entranceways: the gate of Beja in the north section and the gate of Ribeira in the southeast section. This lower zone has historically hosted those profiting from the goods arriving or leaving via the Guadiana. The wealth generated by the external trade became affixed in this specific area of the town, turning it into the commercial centre of the municipality of Mértola. The main street (formerly Rua Direita) faces the Guadiana at the eastern end of the wall and contains both warehouses and the residences of prominent merchants. During the *Ancien Régime*, this area underwent a process of densification that went unmatched in any other area of the town and, alongside the adjacent Largo da Misericórdia, this
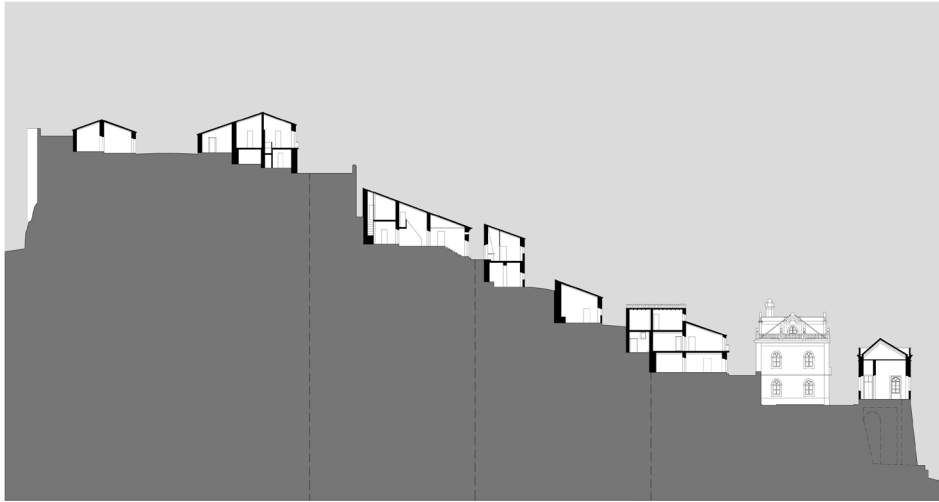
Figure 7. *Cross section of the old town passing through the main square (source: Costa, 2015).*

was the area with the largest number of two or three floor dwellings (Costa, 2015: 177-9). It is hence unsurprising that this area also became the political centre of Mértola, hosting both the main square, Praça da Vila, and the Town Hall, which held great importance throughout the *Ancien Régime* and experienced major transformation during the transition from the nineteenth to the twentieth centuries.

Remaining within the intramural space, the areas at the highest elevations correspond to a second urban subunit (UL2), characterized by a more elementary urban fabric with a preponderance of single-floor buildings. These upper areas were traditionally populated with craftsmen – blacksmiths, bakers, seamstresses, weavers and shoemakers – who served the town and the nearby rural settlements through to around the 1970s. Correspondingly, several houses in this area would have simultaneously served as homes and workshops. The northwest section is the most recent area of occupation with the castle's slopes corresponding to the last buildings dating to the final quarter of the nineteenth century.

Urban expansion beyond the wall and the gate of Beja dates back at least to the beginning of the seventeenth century and constitutes a third urban subunit (UL3). The structure of Arrabalde da Vila, as this area is known, is set out in an organic manner and follows the contours of the Beja road, the paths to the churches of Santo António dos Pescadores and Nossa Senhora do Carmo and the northern section of the town wall. The Arrabalde da Vila urban structure initially emerged out of undifferentiated constructions, primarily containing a neighbourhood of single-storey houses through to the third quarter of the eighteenth century.[3] Arrabalde da Vila in fact provides an area of transition, where rural themes persisted and the larger dwellings included often their own yards, vegetable gardens and barns and with even some of the smaller houses having their own pig sties or cattle sheds. It would not be until the nineteenth century that Arrabalde became the living choice of the upper classes. The low density and wide empty areas on the northern limits of this neighbourhood of small houses were ideal for constructing large residences with equally large gardens and lands, something that would be inherently more difficult inside the town's walls.

This beyond-the-walls expansion would also impact on the left bank of the Guadiana and what we may consider a fourth urban subunit (UL4). The east road arriving from Serpa, ended by the river, where a pontoon bridge established the connection with the Gate of Ribeira of Mértola. At the end of the road, there arose a two-nucleus settlement that is called the "Suburb Beyond the River" – Arrabalde de Além do Rio. Just as on the northern outskirts, this was a place of arrival for people, animals and goods and consisted mostly of single-storey houses and larger barns (Costa, 2015: 174).

Its importance would rise from the beginning of the second half of the nineteenth century with the São Domingos ore mine, located in the hinterland of the left bank, launching industrial scale operations (from 1855 to 1965).

The hilly territory around the town, shaped by different peaks, requires approaching as a fifth urban subunit (UL5), although historically characterized by only a few scattered buildings. The topography acquires great importance in the urban morphology through a network of representative constructions built at key-points and determining the surrounding scenery-scape system.

That network set the limits for the constructed urban territory and subtly indicated the ways in and out of Mértola as well as its paths of expansion. Chapels, churches and the local convent were correspondingly scattered around the aggregating territorial center: the hilltop of the walled town. Based on this contrast, the architecture of the dispersed buildings in this subunit (UL5) reveals, once again, the importance of the physical territory for the place, contributing to what Norberg-Schulz (1985: 31-41) called "figural quality" and "experience of arrival".

In keeping with the particular characteristics of this territory, and the historic processes involved in its transformation, the town acquired significant diversity across its urban fabric and vernacular architecture as we may thus confirm by describing the various building types identified in Mértola's urban space.
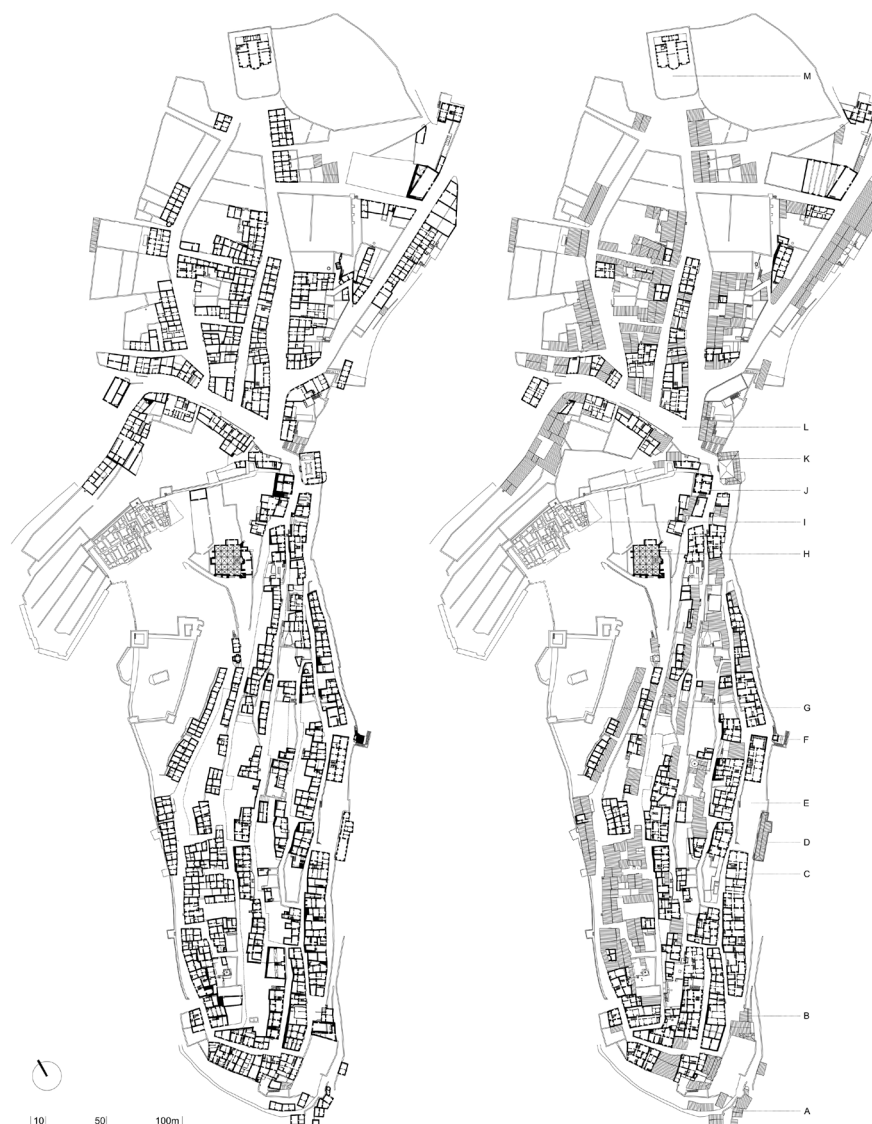
3.2 Historical diversity of vernacular architecture in the different urban landscape subunits

By analysing the town as a whole – considering the plans drawn up under the auspices of this research project (Figure 8) – we are able to recognize the importance of the cellular composition structures and the evolutionary dimension already described above for the rural territories. The basic typology of Mértola´s urban housing consists of the simple double-cell dwelling. Usually, these cells were arranged in depth and displayed similar sizes, rendering the houses rectangular-shaped and mostly narrow. All the walls were load bearing and made of shale stone and rammed earth. The expressions "casa dianteira" (front room), "casa de fora" (outside room) and "casa de entrada" (entrance room) all served to designate the first room that was only illuminated by the front door (Figure 9-2). The terms "câmara" (chamber) or "casa de dentro" (inside house) were applied to the contiguous compartment that sometimes also provided access to a yard. The kitchen was not a sole division *per se* as the fireplace might be located either at the house entrance (with a chimney projecting on to the main façade) or at the rear (where there frequently was not even a chimney with the fireplace lacking any extraction system).

The lower urban densification pressure, which characterized certain areas of the historical village, resulted in the preponderance of one-storey buildings, composed of several dwellings similar to those described above (type U1). This typology is today especially evident in urban sub-units UL2 and UL4, sometimes recalling the freer layouts of the oldest buildings in rural settlements (types R1 and R2). In any case, contrary to what occurs in the rural territory, the town's set of buildings is characterized by their absence of any central alignment of gabled cells with ridge beams to consist solely of this combination of mono-pitched roofs.

In contrast, the buildings located in the lower area of the intramural town were shaped by the port's activities - subunit UL1 – and thus benefited from a richer and more complex typological process, involving their growth in height and surface as well as the ennobling of the residences. The narrow-fronted type houses were here submitted to three different expansion processes: the joining of buildings belonging to two or more contiguous properties; the growth in height with the integration of a second floor and, in some cases, an attic; and the backwards expansion of the building with the partial occupation of the yard (Costa, 2015: 179). The growth in building height also benefited from deployment on steeply sloping streets that allowed for entrance across different levels.

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Figure 8. *General plans of the town of Mértola (old village and Arrabalde). A – Ribeira quarter; B Gate of Ribeira; C – Town Hall; D – Old Court; E – Town Square; F – Clock Tower; G – Castle; H – Mother Church and Old Mosque; I – Old Alcaçova quarter (archaeological site of the Islamic period); J – Old Jail; K – Market and old Gate of Beja; L – Vasco da Gama Square; M – School (source: Costa, 2015).*

During the *Ancien Régime*, this process of housing transformation included very diverse solutions in terms of their spatial organization, size and social representation. However, in most cases, this resulted in the affirmation of widely fronted, high dwellings (type U2), which had their main living areas on the second floor (the noble floor), and sometimes extended to an attic for servants, while the commerce, retail, warehouses, and other facilities were located on the ground floor (Figure 9-3). These buildings were organized

spatially from the axis consisting of the main door on the ground floor, an atrium (which allowed autonomous access to both floors) and the staircase (placed against a transversal load-bearing wall that accompanied the mono-pitched roof angle). On the noble floor, the most important social spaces were set to face the main façade (taking advantage of large river facing windows and balconies), with the kitchen and service areas relegated to the back section that interlinked with a small patio. From a construction point of
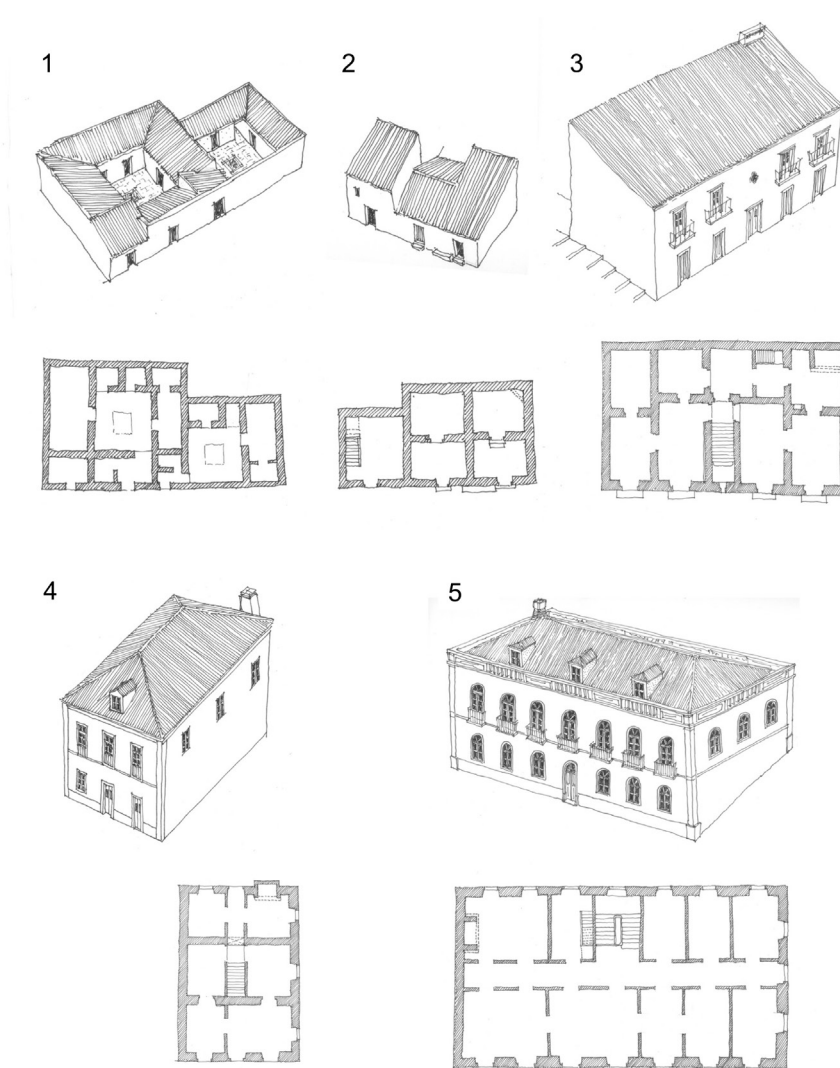
Figure 9. Schematic drawings of the Islamic house (Alcáçova quarter) and typologies U1, U2, U3 and U4 (source: Costa, 2015).

view, each room continued to be fully enclosed by structural walls (whether stone masonry or rammed earth) with only very rare recourse made to partition walls. In terms of roofing, extensive mono-pitched roofs predominate while in some cases combined with smaller gable roofs or terraces.

However, this concept of spatial and constructive organization was to lose relevance over the course of the second half of the nineteenth century following the establishment and consolidation of the Liberal State and the opening of the São Domingos mines (about 20 km from the town), which brought about an important new economic cycle on a regional scale. This process very closely resembles that characterized above for the architecture of rural territories (types R3 and R4). In construction terms, the new dwellings

began applying more complex roofing systems (including, for example, different types of trusses) that enabled the interior building span to be widened and organized mainly by partitions and other non-load bearing walls.

In a transition period, this desire for change carried repercussions reflected not only in alterations to pre-existing buildings in the intramural town (dividing the largest compartments, integrating corridors with partitions, undertaking decorative paintings and installing new doors and ceilings) but also in buildings built from scratch, especially in the extramural area which, to a greater or lesser extent, combine the characteristics of both the old and the new dwellings. One example that accurately conveys this transition typology (type U3) is the central staircase house, which is organized around

a central axis, comprising of an entrance hall, a straight flight of stairs and a second lobby or distribution corridor on the upper floor level leading on to three wings of compartments (Figure 9-4). The most important divisions – living rooms, the master bedroom – would be placed at the front with their windows opening on to the street, and with the kitchen at the rear of the plot, next to the yard. Small adobe partition walls served to structure the plot depth and combined with transversal masonry and rammed earth walls to support the timber floors. At the ground floor level, this type of housing might have included either commercial or residential purposes.

The new bourgeois dwellings of the second half of the nineteenth century and the transition to the twentieth century already heralded the great changes that would gradually become consolidated (type U4): the greater specialization of the various dwelling spaces (combined with the decrease in the average compartment size); the provision of greater privacy (especially for the bedrooms) and the growing importance of vestibules and corridors; a more rational design emerging in the planimetric composition and façade openings; and the integrating of stylistic forms and ornaments from the rich nineteenth and twentieth centuries architecture, which attest to clear influences of models imported from abroad. These new solutions feature, on the other hand, a less adaptive character, almost always trying to counteract the constraints arising from the site (Figure 9-5).

As recognized for rural buildings from the same period (types R3 and R4), there is also here an avoidance over organizing the ground floor, with spaces at different levels. Thus, from this moment on, the works started, almost always, with the terracing of the whole plot at the same level. In this context, the expansion areas of Arrabalde (sub-unit UL3) were increasingly the privileged spaces for constructing more affluent buildings, which themselves benefited from the new open roads and wider plots adjusted to such typologies. Furthermore, also within the intramural area (especially in the UL1 sub-

unit), we also encounter some affluent residences from this period with their construction requiring an even more complex set of prior operations, which ranged from the acquisition of several contiguous plots to the complete demolition of the old buildings therein existing (Costa, 2015: 184-6). The full affirmation of this new bourgeois model thus applied a blank slate approach to the pre-existing buildings, striving for a more imposing presence in the urban space, that assumed a new structural building conception attributing greater importance to the representation spaces within (entrance hall, dining room, symmetrical or asymmetrical stairs and corridors serving as core distribution spaces).

4. Territory and history in the domestic architecture of Mértola

The study of the traditional landscape of Mértola confirms the deep relationship between territory and vernacular architecture.[4] Moreover, when this relationship is framed in terms of the image and technologies of traditional buildings, it justifies the integration of Mértola into the Southern Iberian region (in the Mediterranean context) – as opposed to the Northern Iberia region – even when taking into account the land boarder that separates Portugal from Spain (Carver, 1981).

The link between territory and vernacular architecture clearly emerges, first of all, in terms of the house, considering, for example, incorporating the locally available materials or the constraints imposed by the respective site of construction (sometimes over very steep slopes). However, this link proves far more comprehensive and systemic as the various housing typologies result from a complex set of interdependent relationships right across the scales of urbanism and landscape. In the study area, the flatter, more even lands with more historically relevant production capacity (RL4) display greater architectural diversity as a result of their more consistent and hierarchical rural settlement (from dispersed houses to large villages) and the heterogeneity of the traditional socio-economic fabric (from rural wage earners to great landowners). In contrast, the more

mountainous areas (RL1 and RL2) correspond to more constant settlement patterns, where a given architectural typology tends to acquire preponderance (type R1 in subunit RL1 or type R4 in subunit RL2).

Contrary to what Mértola's image might suggest, its domestic architecture is characterized by relative diversity. This diversity first of all associates with the specificity of the various urban subunits susceptible to definition. However, beyond the identity of each of these subunits (linked, among other parameters, to its respective physical territory), we were able to identify the antagonistic models of adaptation these buildings applied to the pronounced slopes that characterize the Mértola landscape. In fact, we may distinguish, throughout the description of domestic architecture, between dwelling typologies with strong adaptive character, which can include the construction of the various ground floor compartments across different floor levels (types U1, U2, R1 and R2), from other typologies with more affirmative volumetric scales, whose building process began with the full levelling of the construction plot (types U3, U4, R3, R4). This diversity – in cultural expres-sion – in reality displays a diachronic dimension that is necessarily part of any history of domestic architecture, which includes other morphological, organizational and constructive parameters. Although this study focuses on an area considered in different periods of history as peripheral and far from the main centres of change, the territory of Mértola displays historical transformations in its prevailing housing that may only be interpreted within the framework of the universal themes of the history of architecture.

Furthermore, this diachronic dimension has already been identified in archaeology in accordance with the importance of the town's relationship with the Mediterranean and the presence of residences organized around patios, displaying particular characteristics in the Roman and Islamic periods (Cf. Rafael & Lopes, 2014; Macias, 2018). Through this research, and also taking into consideration the historical written sources, we were able to confirm the profound socio-cultural transformation in the transition from the Islamic medieval period (Figure 9-1) to the Christian medieval period (Figure 9-2). This transition had a great impact on house layout, with antagonistic solutions in the separation between the private domestic spaces and the outside communal spaces.

The importance of the relationship between the public and private domains for vernacular architecture has already been recognized in several geographical and socio-cultural contexts (Rapoport, 1969: 66-68). In relation to Mértola, the archaeological excavation of the neighbourhood of the Alcáçova (Almohad period) confirmed the prevalence of safeguarding private family spaces in Islamic homes (cf. Petherbridge, 1978: 195-201), considering: the inward facing house organised itself around the central courtyard; the façade with a single opening which gave access to the L-shape entrance; and a clear hierarchy of internal spaces expressed in significant variation in room dimensions.

With the consolidation of the Christian dominance (after the conquest of Mértola in 1238 AD), the Almohad courtyard house gave way to a typology
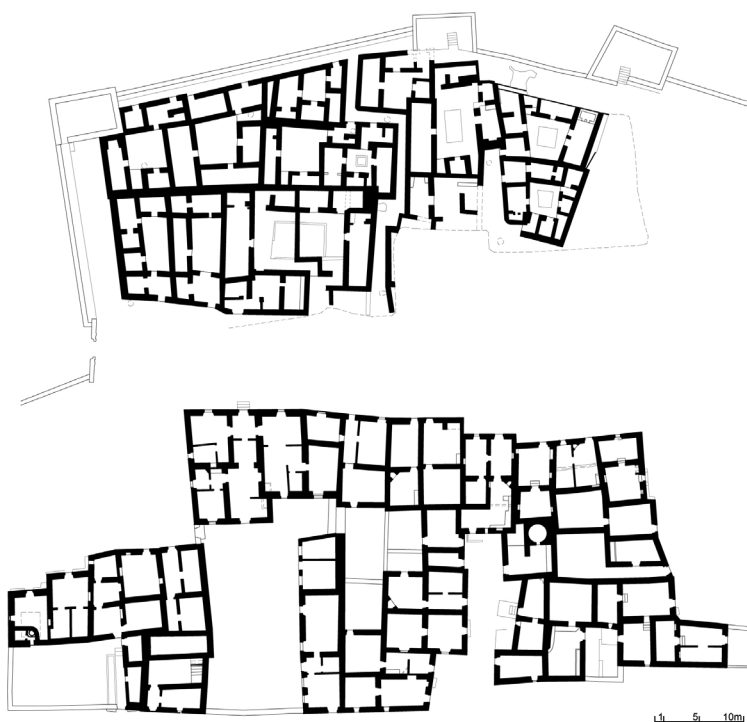
Figure 10. Comparison of the urban fabric of the Alcáçova quarter (Islamic period) and a group of dwellings in the upper part of the old village.

with characteristics very closely resembling those described in late medieval and modern written sources on different regions of southern Portugal and covering both rural and urban areas (Figure 10). It is a very divergent model, in which domestic activities extended from inside the dwelling to the public space, comprising a simplified internal organisation with few rooms of identical size and shape.

This consists of a dwelling composed of two or more spaces interlinked in depth (especially in urban contexts) or width (especially in rural contexts), associated whether with the profound transformation of longstanding settlements or with the founding of new settlements on the new southwestern boundary between the Christian kingdoms of the peninsula. It was this dwelling that underwent consolidation and transformation during the *Ancien Régime*, reflected in the older constructions identified within the scope of this project although with differing levels of incidence (types U1, U2, R1, R2) across the various subunits of rural or urban landscapes.

Until the end of the *Ancien Régime*, the construction or transformation of Mértola´s buildings comprised a "relative anonymity of the single house within the urban matrix" as characteristic of the Mediterranean countries (Norberg-Schulz, 1985: 105-6). With the social and political transformations that followed the establishment of Liberalism, and, in particular, over the course of the second half of the nineteenth century, there was an increased trend for bespoke housing, especially among the higher classes, who wanted their houses to stand out either by their size or ornamentation (Costa, 2015: 188). These changes were gradual and linked to the emergence of 19th century architecture, and, once again dictated by the influence of external models, that impacted across the morpho-typological, imagetic and constructive levels (types U3, U4, R3, R4). In many respects, these already heralded the great changes in contemporary architecture associated with the gradual generalization of industrial building systems.

5. Conclusion

The diversity of Mértola's domestic architecture results from the interlinkage of several models of housing organization, which attest to the town's integration into the generic themes of the history of architecture and urbanism with parallels to other regions in Portugal, the Mediterranean and the world. However, such diversity is also a consequence of adapting these models to quite varied circumstances, with distinct solutions for both flatter and more mountainous areas, or urban and rural settlements, so their interpretation becomes clearer through interrelating the various scales of analysis (architecture, urbanism and landscape).

The most profound societal changes resulted in significant alterations to the organisation of space at different scales, which, rather than a by-product, constituted "an intrinsic part of them and even to some extent causative of them" (Hillier & Hanson, 1984: 27). Despite the persistence of certain traditional construction techniques (support walls, rammed earth and schist masonry, lime and sand based coverings, tiled roofs, etcetera) over time, and through to the second half of the last century, research on Mértola's architecture demonstrates a temporal dimension that contradicts the ahistorical conception of vernacular architecture,[5] often associated with fanciful interpretations of the living conditions they provide their residents. In the case of Mértola, the housing architecture of the less privileged classes fell far short of comprising the conditions these communities desired at different moments down over time (Torres, 2014b).

Of course, the relevance of history in popular architecture and its specific ways of living cannot be interpreted by the same instruments that serve to study the history of so-called erudite architecture. Although recognizing slower rhythms of change, we nevertheless need to consider, as in the case of Mértola, the influences of erudite architecture on anonymous architecture, of urban architecture on rural architecture as well as the combination of materials arriving from abroad (as happened here along the Guadiana) with the materials sourced locally.

The preponderance of vernacular architecture studies depart from the identification of regional types and the research on the profound transformation in the housing production processes that modernism consolidated, thereby contributing to simplifying the historical process out of the contraposition between pre-industrial and post-industrial architectures. It is within this context that the architectural history of vernacular domestic housing acquires greater importance, necessarily incorporating a more integrative approach, with more circumscribed areas of study, considering the concepts and methodologies not only of architecture, geography and anthropology but also of archaeology, documentary history and landscape architecture, among others. In the case of Mértola, the importance of studying the history of domestic architecture extends beyond scientific research in seeking to contribute to a local development project based on appreciating and safeguarding the different expressions of cultural heritage and returning very interesting results in terms of combating the processes of demographic regression and human desertification that have hitherto characterized the interior areas of Portugal.

Endnotes

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[2] Should we consider, for example, a cross section through the town square (see Figure 7), we rise from an elevation of 26 to that of 64 over a horizontal distance of about 100 meters. Indeed, it is the preponderance of sites with such steep slopes that has been the primary focus in the generic descriptions of architectural morphology of Mértola, including for example Gutkind (1967).

[3] The 1765 Livro da Décima registers about 66 houses, of which only twelve are described as 'high and low' or 'single-storey with an attic' (Arquivo Municipal de Mértola, 1765).

[4] Especially when considering a definition similar to that in the Encyclopedia of Vernacular Architecture of the World: "Vernacular architecture comprises the dwellings and all other buildings of the people. Related do their environmental contexts and available resources, they are customarily owner- or community-built, utilizing traditional technologies. All forms of vernacular architecture are built to meet specific needs, accommodating the values, economics and ways of living of the cultures that produce them" (Oliver, 1997: XXIII).

[5] This dimension contrasts with Bernard Rudofsky's very narrow interpretation of vernacular architecture: "Vernacular architecture does not go through fashion cycles. It is nearly immutable, indeed, unimprovable, since it serves its purpose to perfection. As a rule, the origin of indigenous building forms and construction methods is lost in the distant past" (Rudofsky, 1987: 6).

References

Agostini, I., & Vannetiello, D. (1999). La casa rurale nel territorio di Mértola: studio tipológico. *Arqueologia medieval,* 6, 267–275.

Arquivo Municipal de Mértola (1765). Livros da Décima [Property Tax books]. Notebooks.

Boiça, J., Rambouts M. F., & Gómez Martínez, S. (2014). Mértola castle. In S. Gómez Martínez (Ed.), *Mértola Museum – General Catalogue* (pp. 85-100). Mértola: Campo Arqueológico de Mértola.

Cancela d´Abreu, A., Correia T. P., & Oliveira, R. (2004). *Contributos para a Identificação e Caracterização da Paisagem em Portugal Continental*. Lisboa: DGOTDU.

Caniggia G., & Maffei G. L. (2001). *Architectural Composition and Building Typology. Interpreting Basic Building*. Firenze: Alinea.

Carver, N. F. (1981). *Iberian villages. Portugal & Spain*. Kalamazoo: Documan.

Cataldi, G. (1977). *Per uma scienza del território. Studi e note*. Firenze: Uniedit.

Costa, M. R. (2010). Alguns temas para a caracterização dos assentamentos rurais no Sul de Portugal. In M. P. Vieira (Ed.), *As Idades da Construção* (pp. 92-109). Lisboa: IEFP.

Costa, M. R. (Ed.). (2015). *Mértola. Architecture in the town and its territory / Arquitetura na vila e no termo*. Mér-

tola: Campo Arqueológico de Mértola.

Custódio, J. (2018). A mina de São Domingos e o Pomarão. *Monumentos,* 36, 110-125.

Espino Hidalgo, B. (2020). Patrimonio cultural como factor de desarrollo territorial resiliente en áreas rurales. El caso de Mértola (Portugal). PASOS. *Journal of Tourism and Cultural Heritage,* 18 (1), 9-25.

Feio, M. (1983). *Le Bas Alentejo et l'Algarve.* Évora: INIC.

Garcia, J. C. (2018). Mértola e a navegação tradicional no Guadiana na segunda metade do século XIX. *Monumentos,* 36, 100-109.

Gómez Martínez, S. (Ed.). (2014). *Mértola Museum – General Catalogue.* Mértola: Campo Arqueológico de Mértola.

Gutkind, E. A. (1967). *Urban Development in Southern Europe: Spain and Portugal.* New York: The Free Press.

Hilier, B., & Hanson, J. (1984). *The social logic of space.* Cambridge: Cambridge University Press.

Keil do Amaral, F. et al. (1962). *Arquitectura Popular em Portugal* (volume II). Lisboa: Sindicato Nacional dos Arquitectos.

Lautensach, H. (1988). As características climáticas. in S. Daveau (Ed.), *Geografia de Portugal,* (pp. 337-369). Lisboa: Sá da Costa.

Macias, S. (2005). *Mértola – O último porto do Mediterrâneo (Volume I).* Mértola: Campo Arqueológico de Mértola.

Macias, S. (2018). *Houses and Daily Life in Islamic Portugal (12th–13th Century): Mértola in the Context of Gharb.* Arts. 7(4), 77 [1-12].

Norberg-Schulz, C. (1985). *The concept of dwelling: on the way to figurative architecture.* New York: Rizzoli.

Oliver, P. (Ed.). (1997). *Encyclopedia of Vernacular Architecture of the World (Volume I).* Cambridge: Cambridge University Press.

Petherbridge, G. T. (1996). Vernacular architecture: the house and society. In G. Michell (Ed.), *Architecture of the Islamic World* (pp. 176-208). London: Thames and Hudson.

Portuguese National Commission for UNESCO. (2018, June). *Indicative list of Portugal's World Heritage (Ministry of Foreign Affairs).* https://www.unescoportugal.mne.pt/pt/temas/proteger-o-nosso-patrimonio-e-promover-a-criatividade/patrimonio-mundial-em-portugal

Rafael, L. & Lopes, V. (2018). Roman house. In S. Gómez Martínez (Ed.), *Mértola Museum – General Catalogue* (pp. 23-42). Mértola: Campo Arqueológico de Mértola.

Rapoport, A. (1969). *House Form and Culture.* New Jersey: Prentice-Hall.

Ribeiro, O. (1998). *Portugal. O Mediterrâneo e o Atlântico.* Lisboa: Sá da Costa.

Rudofsky, B. (1987). *Architecture Without Architects. A Short Introduction to Non-Pedigreed Architecture.* Albuquerque: University of New Mexico Press.

Silbert, A. (1978). *Le Portugal Méditerranéen à la fin de l'Ancien Régime.* Lisboa: INIC.

Silva, L. (2006). As barcas de passagem e o tráfego do Guadiana: apontamentos etno-históricos. *Era-arqueologia,* 7, 126-133.

Stanislawski, D. (1963). *Portugal's other kingdom: The Algarve.* Austin: University of Texas Press.

Torres, C. (2014a). Museums and tourism. In S. Gómez Martínez (Ed.), Mértola Museum – *General Catalogue* (pp. 11-21). Mértola: Campo Arqueológico de Mértola.

Torres, C. (2014b). House of Mértola. In S. Gómez Martínez (Ed.), *Mértola Museum – General Catalogue* (p. 229). Mértola: Campo Arqueológico de Mértola.

Varanda, F. (2002). *Mértola no Alengarve.* Lisboa: Assírio & Alvim.