

**From
Vernacular
to World
Heritage**

edited by

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SAVERIO MECCA

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Ricerche. Architettura, Pianificazione, Paesaggio, Design

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Letizia Dipasquale
Lucia Montoni
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Università degli Studi di Firenze

Introduction: environmental context

The Chorá of Pátmos, one of the best preserved and oldest of the Aegean Chorá, is settled in one of the highest points of the island of Pátmos, about 200 m above the sea. It is characterised by compact, white-washed volumes, terraces that fit together and adapt to the morphology of the ground. Pátmos is one of the smallest inhabited islands of the Dodecanese, a group of Greek islands in the Southeastern Aegean Sea, off the coast of Asia Minor. The island has an area of 34.05 km², and 3047 residents that are distributed between the settlements of Chorá and Skala, the commercial port. The island is dominated by the Monastery of St. John the Divine (190m above sea level), located at the highest point of Chorá, from which it is possible to observe the morphology of the whole island, the neighbouring islands, and the coast of Asia Minor. The island is long and narrow, with further narrowing in the middle; its morphology consists of a harmonious succession of rocky hills with scattered Mediterranean vegetation that end in an impressive variety of beaches and gulfs.

The high landscape value of the Chorá of Pátmos is already recognised in the 1970-71 legislation as “historical and landscape monument” first, and subsequently as “historical monument and place of special beauty”. Although new buildings have been identified in the limits of the site, we can consider the boundaries of the settlement almost completely unchanged.

Since 1999, the Historic Centre (Chorá), with the Monastery of Saint John the Theologian and the Cave of the Apocalypse on the Island of Pátmos, have been added to UNESCO’s World Heritage List. The city represents one of the few settlements in Greece that has developed continuously since the 12th century (World Heritage Committee, 1999a).

Historic development

According to the Greek mythology, Pátmos was a sunken island that came into existence thanks to the divine intervention of the goddess and huntress of deer, Artemis, daughter of Leto. During the Hellenistic period (3rd century BC), the settlement of Pátmos acquired the form of an acropolis, surrounded by a fortification wall and towers. Traces and remains of wall foundations from the 4th century B.C. were found in the area of present-day Skala (Iakovides, Philippides, 1990). Since 95-96 AD, the island entered the history of the Christian world, when the apostle St. John, the Divine, spent his exile on the island and composed the Gospel and the Apocalypse (Philippides, 1999). Nowadays, it is one of the

opposite page

Chorá in Pátmos island, Greece

The extension of Chorá, on the ridge of the mountain, is particularly appreciable from the surrounding hills. The houses are arranged along the slope and the fortified monastery, dedicated to St. John the Theologian, represents the core of the settlement and the elevated volume of the city
(© A. Verrina, 2018)



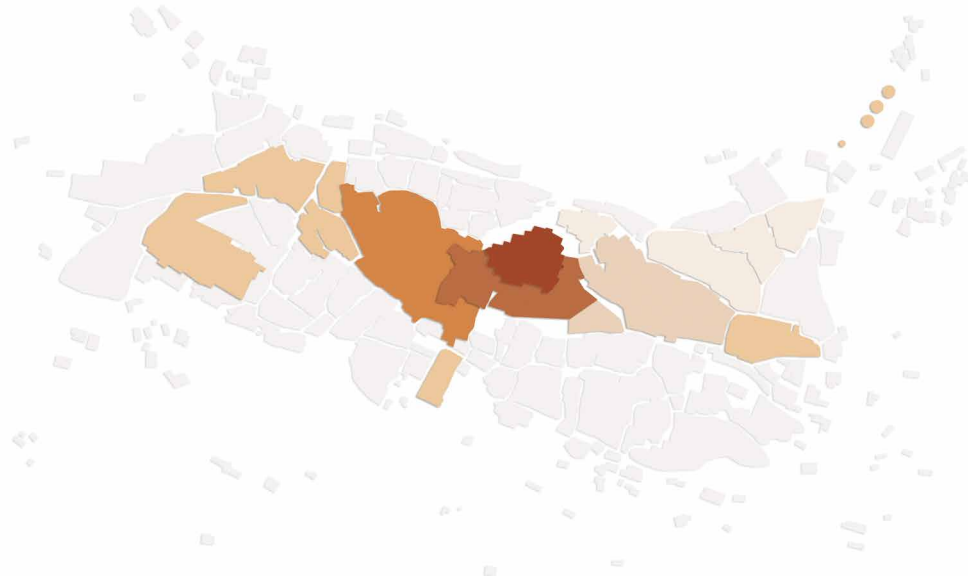
Aerial video of Chorá

(© A. Manzi, L. Montoni, A. Verrina, 2019)



Historical evolution of Chorá

The historic districts are underlined in different shades of orange. From the central monastery, built in 1088, to the 18th century neighbourhood
(© A. Manzi, L. Montoni, 2019)



Localisation of Pátmos, Dodecanese, Greece



seven most important Christian world pilgrimage sites. In 1088, the Byzantine Alexius Comnenus and the monk Christodoulos of Latros began to erect the Monastery dedicated to St. John, a task which took five years. It benefited from the help of 150 monks for the construction work, some experts from Constantinople for the planning of the Monastery, artisans from Trabzon for the fortification, and unskilled labourers from the surrounding island. From 1132, an agrarian settlement began to develop around the base of the Monastery's high walls. The local inhabitants were increased by immigrants that came from the surrounding islands and from the coast of Asia Minor across from Pátmos to escape the persecution of the Turks. In 1453, after the dissolution of the Byzantine state, a new wave of refugees from Constantinople settled in the Chorá, building a new neighbourhood, called *Alloteina*. The new settlers, with a higher cultural level, introduced in Pátmos new urban customs and ways of life, but they did not upset the existing economic and social structures controlled by the Monastery. The old and the new settlement were enclosed by a five-gated wall: this area was called *Eso Kastro* (Iakovides, 1990). The conquest of the Venetian Rhodes by the Turks in 1522 led to a wide-scale reshuffling of the populations in the Dodecanese, including Pátmos. In this period (1522-1636), several rural complexes arose outside the fortified zone (*Eso Kastro*), respecting the geomorphology of the site. Part of the settlements located near the monastery walls were demolished to make way for the crops needed for the subsistence of the monks.

The Venetian invasion of the island in 1659 did not cause structural changes of the settlement, but influenced the economic and social life that moved from the monastery to the community of Pátmos. After the fall of Candax in 1669, many Cretan families sought refuge on the east part of the Chorá. They founded the *Kritika* district, and the first square of the settlement (the present square of *Ayialevia*) was created. In the following decades, the population density increased, the urban tissue grew denser, the fortified walls were expanded, and the rural complexes were integrated into the urban structure and fragmented into several housing units (Iakovides, Philippides, 1990). On the steepest part of the hill, overlooking *Skala*, the district of *Aporthiana* developed. In the early decades of the 1800s, Chorá reached the economic and urban highest point. The period between 1832 and 1947, during the Italian occupation, was character-



ised by degrowth and migration. From 1947 to today, the development of the city is characterised by the appearance of mass tourism, the economic growth and the increase in construction activity.

Methodology of investigation

In the framework of 3DPAST project, the research on Pátmos was developed in two main phases. The first part of the research concerned the analysis of the tangible components of the architectural heritage of the Chorá of Pátmos: the urban structure, the evolution of the main architectural typologies and the feature of the main building systems. The analysis was conducted by crossing what little information was available in the literature with the results of the fieldwork, which was based on direct observations and surveys of the buildings, interviews with inhabitants, professionals, local experts and administrators. The second part was focused on the risk analysis on heritage and the assessment of the impacts on the heritage, adopting the HIA (Heritage Impact Assessment) method. To date, the built heritage of Chorá appears to be rather well preserved, both as regards the state of the historic buildings and the containment of the urban sprawl outside the boundaries of the ancient settlement, which would otherwise have altered its authenticity. But the built heritage of the Chorá is nowadays at risk, as it is affected by a phenomenon of abandonment by the inhabitants, along with new pressures for transformation with the purpose of encouraging mass tourism. Threats and dangers for the preservation and conservation of the site were identified by processing the information from the interviews with the municipal authorities, direct observation of the site, recommendations and evaluations in the 2014 Periodic Report. This approach has been applied to identify possible strategies for the conservation and sustainable development of the Chorá (Nijkamp, Riganti, 2008).

Urban features

The transition from the urbanised area of the Chorá to the surrounding rural area are well defined. Chorá can be reached via the only driveway that runs along the entire island, and a nineteenth-century pedestrian street that connects it with Skala. The fortified monastery dedicated to St. John the Theolo-



Public spaces and streets

In grey the secondary driveway, in light grey the main driveway, in orange the pedestrian path, in red the squares and in blue the covered passages
(© A. Manzi, L. Montoni, 2019)

Current use of buildings in Chorá

In orange the commercial, in light orange the residential buildings, in red the religious buildings, in blue the public services, in light blue the museums, in brown the windmills and in grey unused spaces
(© A. Manzi, L. Montoni, 2019)



①
**Buildings and streets in the
 settlement of Chorá**
 (© L. Dipasquale, 2015)

gian represents the volume that dominates the city. It is placed on the top of a promontory and has the appearance of a castle. The settlement features numerous small churches inserted in the urban fabric, some private chapels and others open to the community, which contain valuable pictorial elements (Olympitis, 1997). To the south-west of the town is the Zoodochos Pege female monastery, another large religious complex, founded in 1605.

The urban structure is compact and the streets are narrow and winding, with an irregular pattern without main axes, almost labyrinthine. The uneven alleys sometimes end in a dead end street leading to the houses. The houses are arranged along the slope and, in general, are built on one or two floors, except for the 19th Neoclassical buildings, which can reach three-storey. These mansions stand out within the settlement for their dimensions. Most of them are located in Aporthiana, replacing the defensive wall towards the port of Skala.

The small courtyards and terraces, which occupy the part of the house facing the street, create a particular play of full and empty spaces. The presence of many covered passages, which were built after the expansion of the second floor of the houses, further characterises the urban morphology. The green urban areas are usually included in private properties, and the few productive and commercial activities are distributed in the north-east side of the settlement. In ancient times there were two important internal axes; the commercial one, which is the one still present today, and the road with small artisan shops to the west. Windmills have been built since 1588 for grinding cereals and other agricultural products. Located in an area on the edge of the city, these are architectural elements that strongly mark its profile.



Architectural features

Functional organisation of the house

The simplest and oldest form of dwelling consists of a single room on one floor, called *monospito* (*mono+spiti*) or *ospition*. The simplest nucleous has a rectangular volume 2,8 to 3,5 m x 7-8 m and 3,5m high. The distance of the longitudinal walls depends on the length of the wooden beams; the ratio between the dimensions of a room is generally 1:2:1. Following the traditional way of measuring (*xylometrima*¹) used by experienced craftsmen before the metric unit, the length of a room corresponds to 10 pieces of cane, the width and the height are 5 pieces. The buildings developed according to the morphology of the slope, parallel to the contour lines, with the entrance mainly located on the short side. Internally, the cell is divided in two areas. The first, next to the entrance, called *spiti*, is dedicated to the daily activities of the home, such as cooking and handicrafts. The second, on the back of the building, called *camari*, was used for sleeping. The division between the two areas is obtained through a partition in stone, wood or cloth. The ratio between the sleeping and the living areas is 1:2.

The first development of the basic cell saw the insertion of a new space between the street and the building: a little courtyard, called *avlidaki*, with an oven and underground cistern. In the case of larger courtyards, it is possible to find a sink, a grinder, a fireplace or a rudimentary bathroom. The presence of the courtyard surrounded by high walls, in almost all the houses of Chorá, shows the need of separation between the public and private spaces (Arikan, 2015). For the lighting of the room, there is a door and a window facing the *avlidaki* and, no openings on the two longitudinal sides of *monospito*. Sometimes, it is possible to find interior windows to light the rear.

¹ Xylometrima corresponds to a cane of 74 cm in length with rudimentary subdivisions (Iakovides, Philippides, 1990)



Internal courtyard

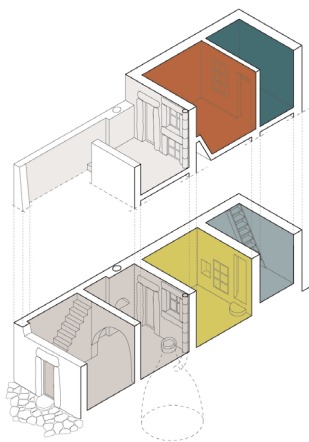
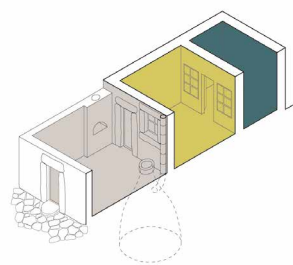
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Traditional house with one or two storey

- storage
- living room
- courtyard
- terrace
- sala
- bedroom

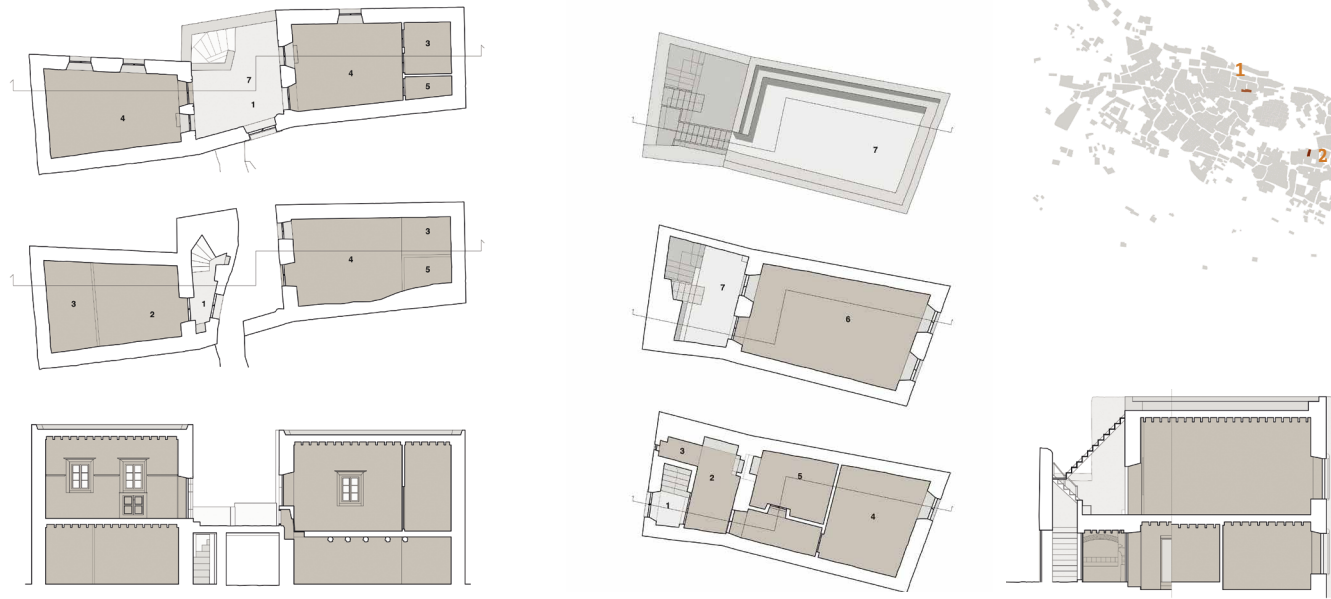
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The following extension of the house consists of the addition of a second floor or, where possible, in the horizontal repetition of the basic cells, which is arranged parallel or perpendicularly to form an 'L' with the existing building. Single-storey buildings are not very common today. In fact, most of the cases studied are relatively more articulated buildings and very often on two floors, the result of integration and transformation processes to meet space requirements. The two-storey house is called *anogokatogo* and consists of overlay of cells (*anoi + katoi*). The two-storey houses of Pátmos differ from similar cases in mainland Greece, where the ground floor was generally used as a barn, warehouse or stable, since the ground floor here was part of the house.

The courtyard is divided into an entrance and an external area, covered by the upper terrace, and houses the oven and the cistern. The terrace, called *pano avli*, is reached by a main external staircase located near the entrance to the courtyard, and by an internal one, called *katarrachias*, which is located at the rear. The added terrace is supported by an arch, called *kamariko*, on the ground floor, which creates a communication between the yard and the remaining outdoor part. With the construction of the *pano avli*, the room on the ground floor became darker, so most of the daily tasks were generally conducted on the covered section of the *avlidaki*.

On the first floor there is a formal space for special events, called *sala* or *kalospito*, usually 4,5 m wide and 7,5 m long, considered the most important place in the house and therefore, much more refined in the furnishings. It was in fact the showcase of the house for visitors, with paintings and photographs hanging on the walls, handicrafts of the occupants and pictures from travels to foreign lands. At the back of this room, adjoining the *sala*, there is the sleeping space: a wooden structure that was set up on the existing wooden floor. In the wealthiest residences this wooden structure is very articulated and heavily decorated with carved and painted decorations. This complex alcove takes the Greek name of *ambataros*. The best preserved example can be found in the Nikolaidis house-museum.



Case study 1

Case study 2

Subsequently, another room was added to the upper floor, called *ondas* or *nondas* which had a dual role. It was used like an observation spot to control the street beneath and as a secret passageway connecting with the adjacent property, which was on the other side of the street. In case of attack, the inhabitants had the opportunity to get into a protected area and defend themselves thanks to this system.

From 1832 on, three-storey buildings arose in the northern area of Chorá, replacing the defensive wall towards the port of Skala. Maritime and commercial exchange with the outside favoured the spread on the island of new architectural styles, in particular of the Neoclassical tradition. The different way of life and attitude of the inhabitants, in addition to this new socio-economic developments, change the architecture of the dwellings from the middle of the 19th century (Filindra, 1975). The new buildings no longer followed the usual path in their composition and construction. Compared to the traditional typology, the volumes are compact, and there is a lower flexibility of the internal spaces.

The date of the Italian occupation of the Dodecanese (1912) must be considered as the end of the vernacular architecture development in Pátmos.

Main architectural typologies

Based on the observation of case studies, two main types of buildings have been identified. The first starts from the basic module (simple cell) and develops in a multitude of variants that arise from the horizontal or vertical combination of one or more cells. It is the most widespread, and characterises the vernacular urban structure of Chorá. The second type is more recent and incorporates neoclassical elements.

The first typology emerged between the 13th and 19th centuries. The variants depend on the way of aggregation of the simple cell and its position in the block, which are influenced by the morphology of the site. The main variations can be classified as:

Localisation and drawings of two old houses of Chorá that have been adapted for contemporary living

- 1 entrance/courtyard
- 2 kitchen
- 3 storage
- 4 bedroom
- 5 bathroom
- 6 sala
- 7 terrace
- interior
- exterior

(© A. Manzi, L. Montoni, 2019)

0 1 5m

Building typologies

From left: drawings of the four variants of the main typology (1a, 1b, 1c, 1d) and the Neoclassical buildings (2). In grey the interior space

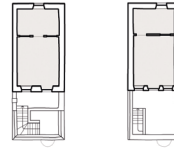
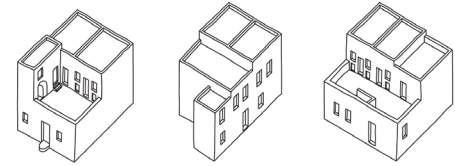
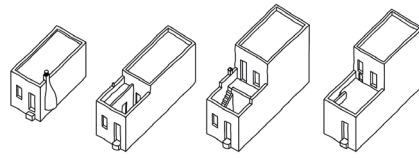
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Building types scheme

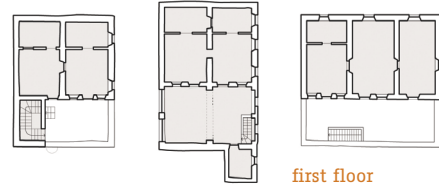
Typology: 1a. Simple cell, in Greek *monospito*; 1b. Twin cells; 1c. Cell with additions; 1d. Single cell with the front parallel to the street; 2. Neoclassical building

- module
- submodule
- courtyard

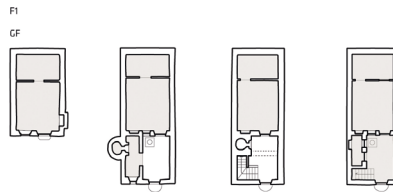
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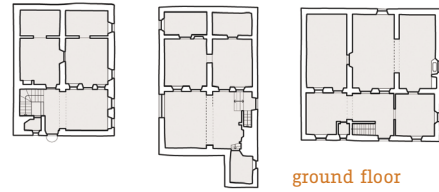
first floor



first floor



ground floor

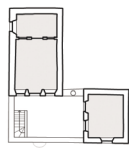
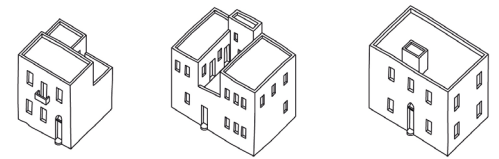
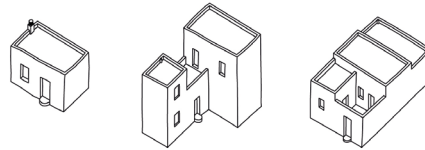
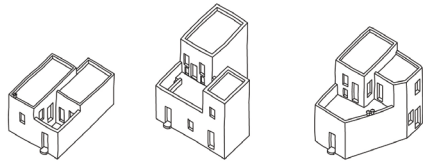


ground floor

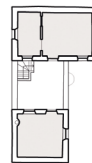
1a



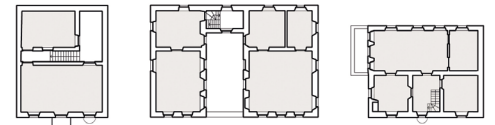
1b



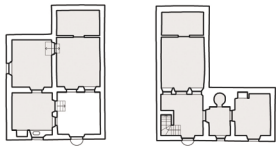
first floor



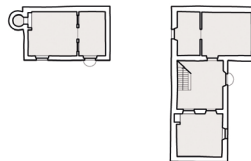
first floor



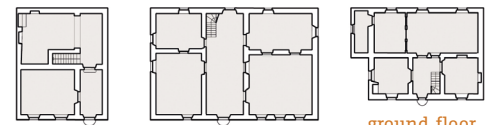
first floor



ground floor



ground floor



ground floor

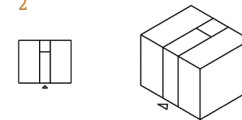
1c

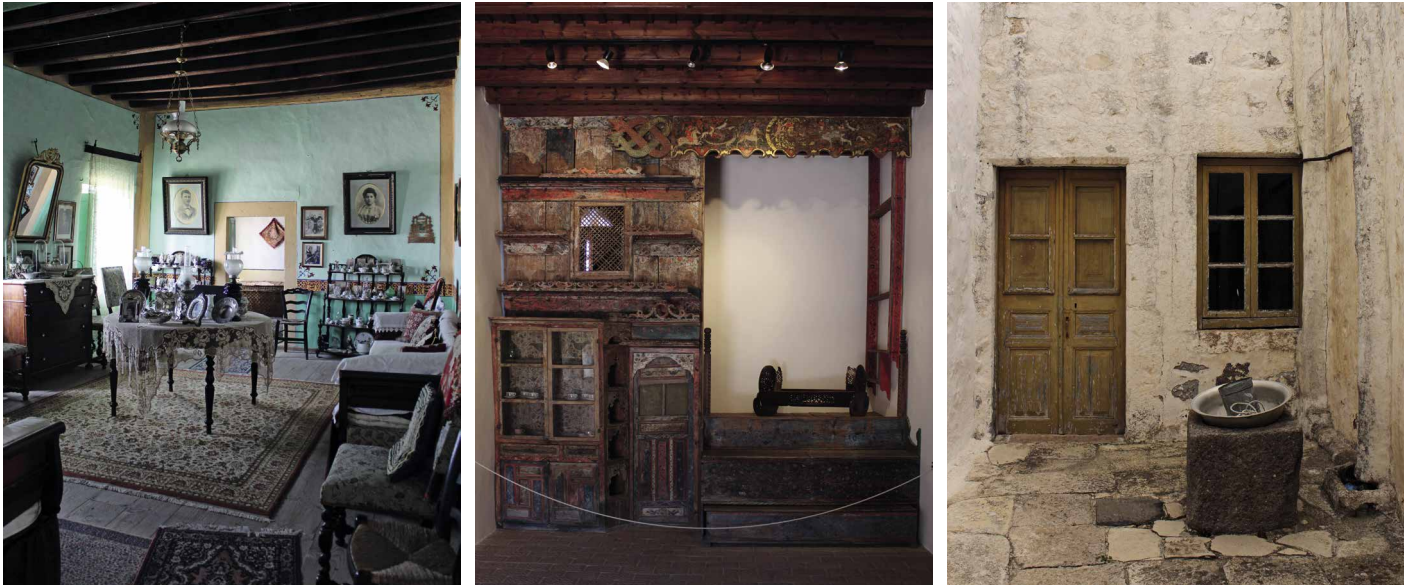


1d



2





Ia. Buildings consisting of simple cells with one or two floors and the entrance on the short side;

Ib. Buildings, with one or two floors, resulting from the overlay of one or more cells, with the entrance on the short side;

Ic. Buildings with one or two floors, with entrance on the short side and added modules in an irregular way, so as to create variations to the scheme and dimensions of the base cell;

Id. Buildings with the entrance in the long side of the cell, with one or two floors, simple or complex.

The second typology was born at the end of the 19th century and corresponds to buildings with Neo-classical influence. Despite the break with the previous architectural typology, there are some elements of morphological continuity, such as the rounded corners and the frames of the exposed stone openings. The new construction trends were also accompanied by the use of a different stone, with a prevalence of limestone, and imported materials, such as marble and gypsum (Filindra, 1975).

Building techniques features

Stone is the predominant material on the rocky island and the main building material. The walls are made with two lithotypes: the granitic grey rock from the quarry of Manolakas, a tough, unwieldy and hard stone, and limestone rock (of a beige-ochre color), from the Megalos quarry, which had less durability and hardness. In most cases, the external walls have a limewash covering. The thickness of the masonry varies between 55 and 65 cm and, in general, decreases as the height of the building increases. Stones are squared and brought to hammer-dressed or straight cut finish before being laid. Stone elements can be more or less dressed, depending on the importance of the building. They have the approximate dimension of 20 x 20 x 40 cm and they are laid in horizontal courses of equal layers, with uniform and staggered joints (Iakovides, Philippides, 1990).

Smaller stones, stone flakes or bricks are used to fill the uneven gaps remaining among the stones and to improve the uniformity of the wall texture. Larger blocks, which occupy the entire thickness of the wall, are used to connect the two external faces. The corner of the walls is made with particular atten-

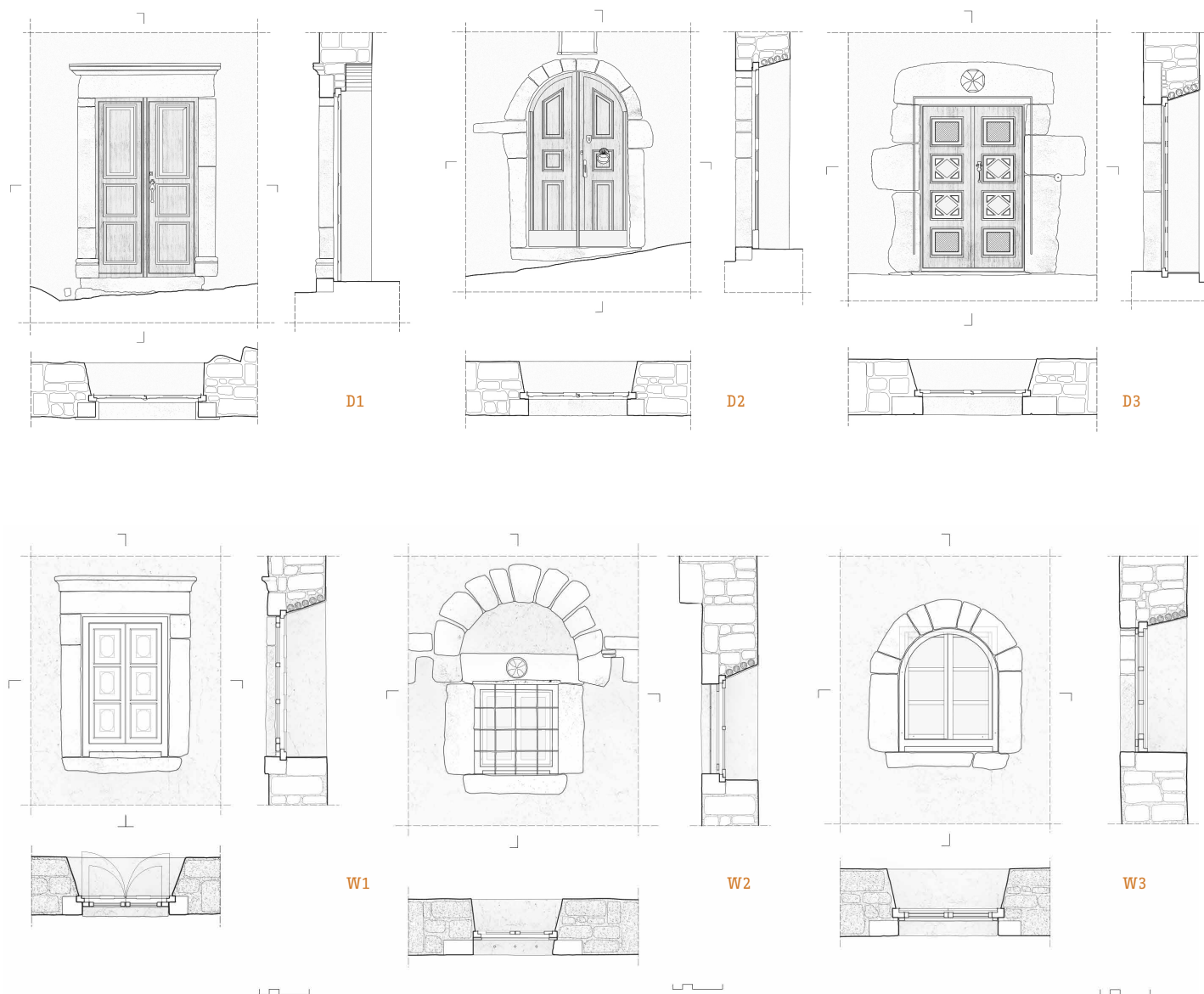


Features of a typical dwelling
The *sala*, the most fine space, in Simandiri Mansion

The *ambataros* in Nikolaidis house-museum

The cistern, placed in the patio, still exists in the houses although not always used

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Openings

D1. Traditional door frame;
 D2. Neoclassical door frame;
 D3. Door with segmental arch;
 W1. Traditional window frame;
 W2. Neoclassical window frame;
 W3. Window with segmental arch

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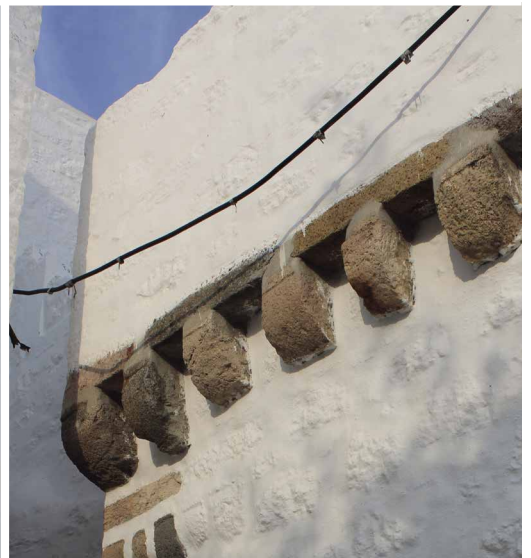
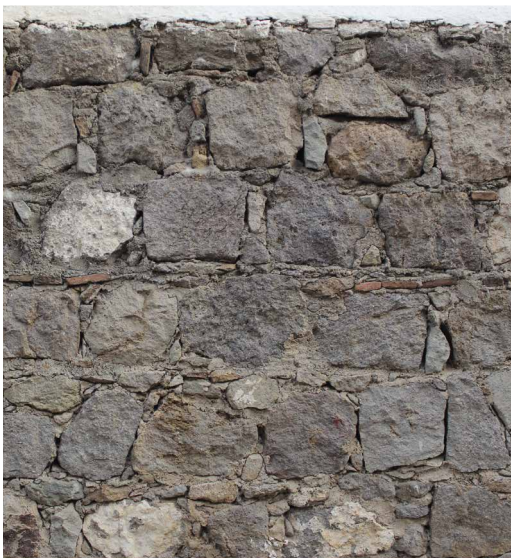
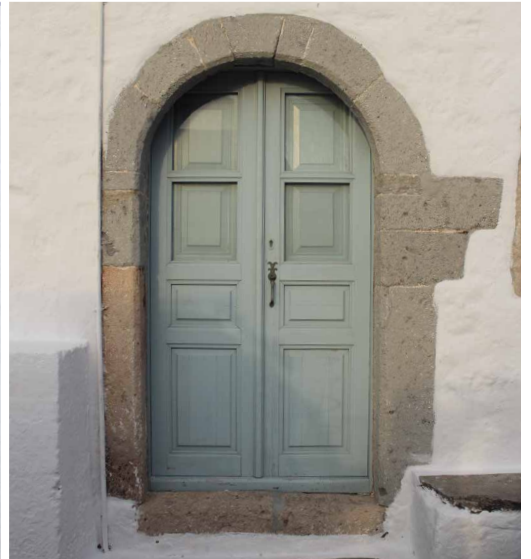
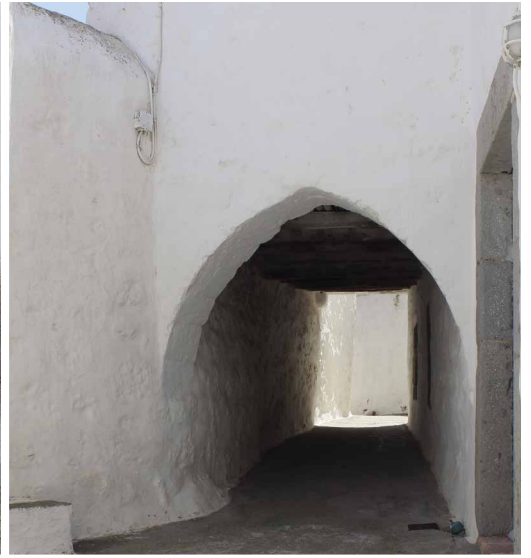
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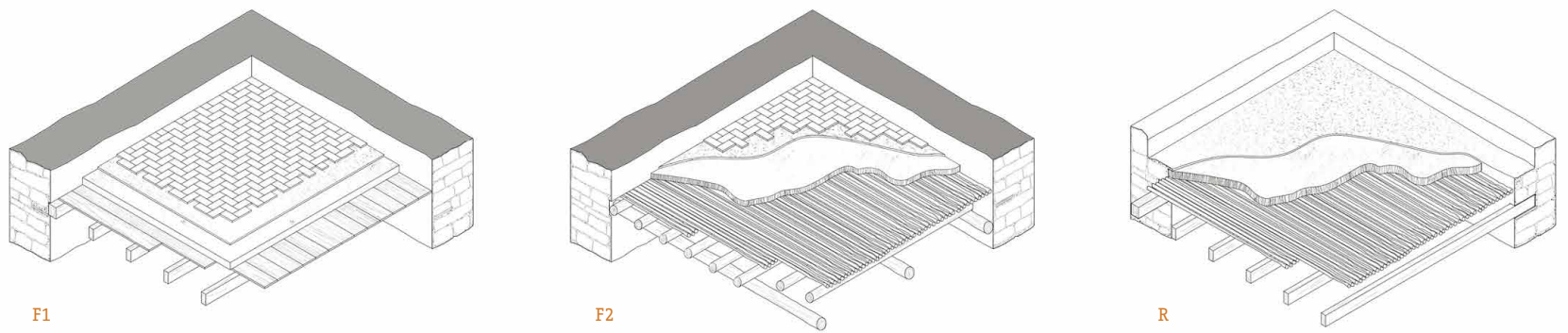
Main constructive elements

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tion, using ashlar blocks and very tight mortar joints. At the ground floor, corners are sliced off to facilitate the passage of loaded animal through the winding alleys of the Chorá. Corners and frames of the openings are not plastered, unlike the rest of the building. The mortar used for the walls is always based on earth and lime, while the finishing plasters are composed of sand and lime, with the possible addition of straw. Terraces and fences are made with dry walls without the use of mortar.

The openings are generally few, located on the main front of the house. The height of the windows corresponds to two canes of *xylometrima*, the sill of the windows is one cane. The structure is made using the technique of the architrave system, called *mantomata*. The stone lintel, with the dimensions of 30 x 30 x 150 cm, presents caved decoration, the date of construction, the name of the builder or symbols, which protected the house against curses. Also the jambs could have glyphs and mouldings running around the contour of the frame. The elements of the *mantomata* (lintel and jambs) have been reused in case of





F1

F2

R



Axonometry of the floors

F1. Simple floor;

F2. Double warp floor;

R. Roof

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demolition of buildings, creating some confusion in the dating of buildings, due to erroneous carved inscription. Few other openings present a round arch, always made with granite or limestone.

To span larger openings (from 3 to 3,5 m wide), for example for the support of the terrace or for the covering of public passage ways, arches or masonry vaults (locally called *voltos* or *kamariko*) were used.

The facades sometimes have discontinuities owed to projections of the upper floor. These serve to give greater regularity to the first floor, as the ground floor often followed the uneven boundary lines.

The maximum span of the rooms of the buildings in Pátmos is 3,5 m, which is why the most recurrent floor has simple warping. The wooden joists rest on the load bearing longitudinal walls. The warping of the joists is parallel to the shorter side of the cell that usually faces the street. Joists have regular-size, usually 7-12 x 8-15 cm, but sometimes rough trunks of 4-8 cm in diameter are used.

In case of bigger spans, for example in the covered passages, a main transversal structure, generally consisting of cypress wooden beams, is arranged every 50 to 120 cm. Above the joists, wooden boards or reed branches were juxtaposed, constituting the support layer for the filling screed, composed of *astivi* (thick, tough, prickly bushes), and then a layer of ordinary sea-weed. Above, a layer of earthen mortar is placed, and then the last finishing in ceramic tiles (*keramidia*) or wooden boards. The entire floor structure reaches a thickness of maximum of 35 cm.

The traditionally most widespread roof of Pátmos is flat, except for the churches, which usually have barrel-vaulted roofs. The structure of the roofs is quite similar to the floors, but has a finishing layer that traditionally consists of earth, lime and crushed tiles (*kourasani*), which was well-tamped, allowing the necessary outflow, so the rain water would flow into the cistern (Iakovides, Philippides, 1990).

The stone paving is used in the entrance courtyard, wooden boards are arranged on the first floor and the typical Pátmos ceramic tile is used to cover outdoor terraces and ground floor surfaces. Different compositions and decorations of the tiles enrich the interior floors.

Risks and impacts on the heritage of Pátmos

The island maintains a significant architectural, natural and spiritual value, and hosts a high number of visitors per year, both for tourism and as a pilgrimage destination.

The impact of tourism is one of the potential threats to Pátmos' values. There are no clear strategies to manage the development of touristic phenomenon. Flows of visitors do not affect its authenticity yet, and it is far from the experiences of the nearby islands that have undergone an overtourism phenomenon. The fascination of Chorá has attracted many foreign tourists, who have purchased residences and settled in the island (Theocharopoulou, 2009). Their presence is often seasonal, but they ensure high continuing standards of care and maintenance. On the one hand, it has launched good practices such as the restoration of some houses in Chorá, on the other, it has incentivised the abandonment of the settlement, as the original owners prefer to sell or rent houses to visitors.

The main movements within the island are towards the city of Scala, which has seen uncontrolled growth over recent decades. This affected the quality and integrity of the Pátmos experience and, if not handle, it is a danger for the values of the nominated site. Scala is the port of Pátmos and holds all the utilities and attractions. Many activities in Chorá are only open in the summer season and there is no community capable of keeping the site active throughout the whole year. The tendency of residents to leave Chorá could compromise the identity of its social texture, as it is the merge of cities and citizens that constitutes the identity of a place.

The material fabric and design features of the significant elements and their organisational patterns have been well maintained, and provide an authentic and credible expression of the site's stylistic and typological models. All major monuments receive regular conservation attention but, despite the good general condition, there are numerous buildings within Chorá in a state of decay or abandonment, mainly in the south-west area, the one most isolated from commercial activities. The bad condition of this area could be a consequence of the high costs to restoration and the depopulation (Filindra, 1975), since when a space is inhabited, spontaneous maintenance mechanisms take place.

Some state organisations have shown interest in rehabilitation projects on buildings, such as the Nikolaidis house, which, after the damage suffered during the 1956 earthquake, has now been transformed into a museum and houses some cultural events and a permanent exhibition on the history of the island. Pátmos is located in an area with a high seismic risk and, despite the traditional techniques that reveal the presence of some anti-seismic construction measures, another element of weakness could be the lack of recent consolidation and strengthening of the structures.

The craftsmanship have been compromised with the modernisation of the construction industry, the progressive detachment from local traditions on the new generations and a dynamic market that requires innovation and internalisation of the artisan product. Some efforts to revive these crafts (such as the typical ceramic tile) are part of a conservation project that supports the use of traditional material for the restoration works.

The risk management techniques applied to the handling of this heritage can help identify priorities in the definition of interventions aimed at recovering or safeguarding architecture (Mecca, Maserà, 2002).



Strategies for conservation



The architectural value of the settlement and the Monastery of St John attract many tourists per year. Despite this, Chorá has maintained its authenticity (© L. Dipasquale, A. Manzi, L. Montoni, 2019)

No management plan has been applied in Pátmos, but the site conservation is achieved through a complementary set of coordination mechanisms and local initiatives. The preservation and safekeeping of the spiritual, cultural and popular tradition of the island is promoted by the Municipality, which organises cultural events and traditional feasts and by associations as the Cultural Centre of Pátmos that was established in 2001 in Skala, and works for the spiritual and cultural development of the inhabitants of Pátmos. Furthermore, inside the settlement there are some house-museums – Nikolaides Mansion (1705-1796), Simandiri Mansion (1625) and Stavrakas Mansion (around 1870-1880) – which are valuable for the enhancement of the architecture and history of the site.

Legal protection is afforded to the nominated site by a number of complementary legal instruments at national level, and no changes to structures or spaces within the area are permitted without the approval of the Ministry of Culture's 4th Ephorate of Byzantine Antiquities, under legislation established in 1960. Monastery and municipality work together for the future perspective, but there are also public institutions, whose objectives are closely aligned with the preservation of the island's cultural heritage (World Heritage Committee, 2014). The combination of responsible ownership, protective legislation, continuous monitoring of construction activity, and evolving traditional coordination mechanisms and relationships is working to assure the survival of the special qualities of the nominated site. In 2007, ministerial decisions have strengthened protective measures for the environment of the island, in particular to better control the buffer zone surrounding the site, where new unauthorised constructions have been built.

To improve the identification, forecast and assessment of the impact of new interventions on Pátmos, it could be useful to apply the Heritage Impact Assessment (HIA). This assessment tool was introduced by ICOMOS within the *Guidance on Heritage Impact Assessments for Cultural World Heritage Properties* (ICOMOS, 2011) and allows to respond to the transformation needs of the sites in a systematic and coherent way. The aim of this tool is to safeguard the values which allowed to include the site in the World Heritage list. The results and conclusions of the HIA can be integrated into the planning and decision-making process to mitigate the negative effects and improve the positive aspects of a project on the Outstanding Universal Value (OUV) of a property (Pereira Roders, Van Oers, 2012; Francini,

2019). An example of application of the HIA was therefore used to evaluate a rehabilitation project hypothesised for a ruined area of Chorá as part of a design proposal developed for an architectural degree thesis (Manzi, Montoni, 2018).

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