THE MORPHOLOGY OF TRADITIONAL DWELLINGS WITHIN AN INSULAR CONTEXT: AMORGOS, GREECE

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This paper traces the effect of historical factors and processes normally encompassed by the term tradition on the morphology of the post-Byzantine dwelling environments of the island of Amorgos in the Aegean Sea. Amorgos is unique in its socio-economic and geographical context, yet it is also an example of larger theoretical issues involved in the study of traditional dwellings and settlements for which adequate empirical data is scarce. The paper discusses how architectural analysis makes it possible not only to interpret the present morphology of settlements on Amorgos, but also to comprehend the historical evolution of these settlements. This is possible because of the double role tradition plays in the diachronic process of settlement evolution. As a factor for stability, tradition results in the establishment of forms with an a-contextual, and thus a-historical, nature. But as a dynamic force, exposed to both external and internal contextual changes, tradition also produces instances of form that are bound to their context. Because forms that belong to a local architectural tradition are to a certain extent a-historical, they can be described and interpreted synchronically. Meanwhile, information inherent in specific instances of form can also be presented as suggestive of the context in which the forms were generated.

"Every work of architecture, like any other form of art, is an unrepeatable, single phenomenon characterized by uniqueness; still, it is defined through formal features, which express problems running from production to use, and which permit its reproduction." The architectural tradition of Amorgos, like an artistic style, is characterized by the generation of certain formal elements which are unique within the historical and geographical context of the Cycladic islands of the Aegean Sea (FIG. 1).

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"Rocky, poor pieces of earth, forgotten by the gods of Olympus and the saints of the Christian faith as well," the Cyclades have been described as "variations on a theme of sky and rock with tight whitewashed villages and deserted hills." Of these islands, Amorgos distinguishes itself as being one of the most remote and — before the advent of the steamer — one of the most isolated. Comprising only some 120 square kilometers, its configuration is also peculiar, and it has been described as having a "ribbon shape very long and narrow with lofty mountains and deep bays."

Amorgos' insular boundaries, the nature of its terrain, and a long and variegated history under the Romans, Byzantines, Latins, and Ottomans combined to bequeath the island a strong cultural identity, while its remoteness and isolation prevented it from falling prey to foreign colonization. Its dwelling forms have, therefore, evolved within the context of a local architectural tradition whose aesthetic qualities are exemplary of what Paul Oliver once described as "[the] formal beauty, massing and classical simplicity" of insular Greek shelter, "[the] masterly, correct and magnificent play of masses brought together in light," so much admired by Le Corbusier (FIGS. 2,3).

This aesthetic image, however, is not the result of randomness, but the outcome of formal elements and rules, often referred to as a "syntax," which originated in response to specific functional needs and other factors of significance, usually encompassed under the concept of "semantics." On Amorgos, the syntactic and semantic aspects of form were interlinked to produce a continuum, a spatial or morphic language familiar to the people whose context made it meaningful. This linkage was made specific over the years by local terminology used to refer to formal building elements. Forms, according to J. Bonta, "only speak because of their position within a certain system — in other terms, because of relations of opposition or similarity established with other forms. Taken out of context, forms convey no meaning. Placed in a different context, they may convey a different meaning."

The continuation of a local architectural tradition presupposes the continuation of a people's familiarity with a spatial language. As a tradition evolves, it is subject to change, and the diachronic outcome of this process must remain meaningful even when the meaning of individual spatial features changes. (On Amorgos, such changes have also been reflected by linguistic changes.) Relationships between form and meaning in a traditional spatial language are originally context-specific. But in order for the tradition to survive, certain elements and rules of composition must acquire a certain typicality independent of their time and place of generation.

Such forms may be thought to have acquired an a-spatial and a-historical nature.

This duality in the relationship of a traditional architectural language to its context is well captured in Alan Colquhoun's distinction between "figure," a configuration whose meaning is given by culture, and "form," a configuration that has either natural meaning or no meaning at all. According to Colquhoun: "While the notion of figure assumes that architecture is a language with a limited set of elements which already exist in their historical specificity, that of form holds that architectural forms can be reduced to an a-historical degree zero." Through their more or less fixed conventionality and typicality, "figures" are thus important to a tradition because they reinforce and preserve an ideology, while suggesting the richness and complexity of reality.

Consideration of this distinction raises the following question: While there is more than one way to synchronically describe and interpret architectural forms for their own sake, how is it possible to capture the complexity of reality embodied in the morphology of a traditional context where both historically specific and a-historical forms can be the carriers of ideology?
This question becomes particularly important in the case of traditional dwelling environments like those on Amorgos for which adequate empirical data is scarce.

An answer to this question lies in the duality of attributes of stability and change, "the active dimensions and passive assumptions" of the diachronic process of transmission — tradition, which is inherent in architectural space, the embodiment of tradition. As a factor for stability, tradition preserves the local ideology and results in the diachronic establishment of forms that are independent of their contextual frame. Meanwhile, as a factor for change, tradition suggests the richness of reality and diachronically produces formal instances that are bound to their synchronic context. Space, however, the subject of an architectural tradition, is a dynamic field in its own right. An architectural language, as defined by Bonta, "[is] in a permanent state of transformation: some forces are driving for change, others for stabilization, while the different stages of transformation correspond to different stages of the development of architectural language and each of them operates according to its own modality." Thus, the effects of stability and change on a traditional spatial context are not only diachronic but "diaspatial," their nature depending on the specific context. This diachronic and diaspatial outcome of tradition on the built environment may in certain cases be said to suggest the context within which the forms were generated, provided there is enough physical data to take the place of empirical data.

Fortunately, this is the case with Amorgos. With regard to architecture, diachronic and diaspatial duality has produced a major distinction between the rural areas of the island and the major, so-called urban centers. (This question of boundaries is common to other traditional environments.) On Amorgos, tradition — which Yi-Fu Tuan has associated with "constraint" because of such factors as limited choice, availability of local materials, nature of local climate, and socio-economic facts of life — has until recently preserved the old ways of building in the agricultural areas. The study of formal instances and building techniques in these rural areas has helped identify those dwellings that belong to the early morphological development of the island's urban centers.

The decoding of the morphological complexity of the urban dwelling environments on the island (the best example of which is Chora, the capital) has included extensive documentation through measured drawings, sketches, and films of some 150 inhabited and uninhabited dwellings. It has also included the generous contributions of older inhabitants of the island and members of the local guilds, who were asked to tell of building instructions and recount oral traditions pertinent to the generation of built space. And it has included a thorough review of the limited literature on the island's adventurous past. Finally, the study of the dwelling forms on the island has encompassed day-by-day field familiarization with the forms themselves.

**FORM AND CONTEXT OF SETTLEMENTS**

The island of Amorgos was once one of the more prosperous centers of ancient Hellenic civilization. Its principal cities at this time were Minoa, Arkesine, and Egiali, all of which were located on its western coast in naturally defensible locations. Excavations in progress have also indicated that settlement sites were located on the southeastern coast, at Markiani (FIG. 4). The ancient sites were destroyed sometime between the fourth and eighth centuries A.D. Their demise has been linked to severe and repeated earthquakes, and to raids by Arab pirates which were common in the Aegean from the seventh to the mid-ninth century.

Subsequent repopulation of Amorgos is believed to have been achieved through the foundation of the great Byzantine monastery of Panagia Chozoviotissa in 1088. This monastery was thought to have been built on an extraordinary site near Chora by Emperor Alexios 1 Comnenos. New historical in-
interpretation, however, has substantiated a claim in the oral tradition that Chora was founded even longer ago, as far back as the ninth century.15

The prime criteria for selecting the new settlement sites on the island were nearness to fields, accessibility to the sea and water resources, proximity to the hills for the construction of windmills, and the availability of southern exposure and protection from northern winds. Chora, for example, was built 367 meters above the sea, about an hour’s climb from its port of Katapola, in a place shielded from the north by Mount Helias, which towers some 600 meters above the town. Similarly, the villages of Brouusi, Kamari, Arkesini and Kolofana were built along a fertile plateau on the south-central spine of the island, the Kato Meria, where they had access to both western and eastern coasts. A view, where possible, was an additional determinant of settlement location. The villages of Langada, Tholaria and Potamos, on the northern part of the island, were built in the form of an amphitheater on low hillsides above the port of Egiali.

Towns on the island are not well inhabited today. Emigration to major urban centers such as Athens has reduced the total population of the island to 1,722 inhabitants, according to the census of 1981. The highest population level, 6,000 inhabitants, was reached toward the end of the seventeenth century. The current population is organized under six administrative localities.16 Geographically and socially, the people are distributed in three general areas: Chora, in the center of the island, with its port of Katapola (made up of the hamlets of Katapola, Xilokeratidi and Rahidi); Egiali, in the northeast, consisting of a port, Ormos of Egiali, and the villages of Langada, Tholaria, and the three settlements that comprise Potamos; and Kato Meria, the lower part of the island in the southwest, which mainly comprises the villages of Arkesine, Brouusi, Kamari and Kolofana.

Settlement forms on Amorgos can best be described as tight systems of irregular building blocks, laid on mountainsides in ways that follow the slope of the terrain — which largely consists of a special rock called pasparos. All settlements follow a linear arrangement with certain enlargements of the main street functioning as plazas that usually also incorporate a chapel and a tree (FIG. 5). Chora is the only town on Amorgos whose form also fits the concentric, defensible pattern typical of other Aegean island settlements.17 This form has been called *chora* or *kastro*, meaning “castle.” A *chora* comprises a labyrinth of small cul-de-sac streets, which, like a snail, form a spiral shape. The habitations are typically well knit to one another, united on a mountain peak or slope dominated by a citadel, monastery, or church. Either the entire ensemble, or
Although no traces of past walls have been found in the *chora* of Amorgos, the chief feature of the town is a gigantic rock formation 65 meters high that rises straight from the town center and is accessible only from the north by a dangerously steep, narrow stone staircase (FIG. 6). Around this rock promontory cluster the flat-roofed houses of the town. The ties between many of the oldest of these are intensified by covered passageways, locally called *brostiajas*, which are formed by arches of Byzantine origin (*doxarias*) (FIG. 7). These pathways are similar in concept, though not necessarily in style, to those of other medieval Mediterranean towns in Europe and North Africa. These were generally produced when dwellings grew horizontally over the street after they could no longer expand vertically. Such passages are not encountered in the rural areas on Amorgos.

Chora's rocky promontory, its only natural defense, was reinforced in the thirteenth century by the Venetians. The castle built on top of the promontory at this time was attributed to Geronimo and Andrea Ghizi, who seized Amorgos in 1207 and held the island as a dependency of the Duchy of Naxos. This *kastro* gave refuge not only to the Chorianoi and the rest of the Amorgianoi, but to many immigrants who fled Latin colonization on neighboring islands, such as Crete. Later on, immigrants also came from the Greek mainland and from the coast of Asia Minor, which was conquered by the Ottomans long before the eventual Ottoman takeover of Amorgos in 1538 A.D. Following the Ottoman conquest of the island, Amorgos' towns were again abandoned, and the population emigrated to Crete and Egypt. A complete return
of the population was manifested towards the end of the sixteenth century.\textsuperscript{19}

This entire era — from the founding of the medieval settlements in the late Byzantine years, through the Latin occupation, the Ottoman takeover, the return of the population in the sixteenth century, up through the end of the seventeenth century — provided the historical reality for the evolution of the dwelling environments on Amorgos. The atmosphere during this time was one of insecurity, caused by piracy,\textsuperscript{20} frequent wars, heavy taxation, and finally by the Ottoman system of land tenure, \textit{vakif}, which replaced both the Latin feudal system and Byzantine emphyteutic system.\textsuperscript{21} Under protection of Islamic law, which favored pious institutions, the monastery of Chozoviotissa, one of the wealthiest convents in Greece, possessed the largest share of land on the island until 1952.\textsuperscript{22}

The impact of these historical events was particularly significant for the island in that they limited Amorgos' contacts with the outside world. This meant that the leading role in the evolution of the island's dwelling traditions was played by the island's physical constraints: its insular character, the scale and nature of its terrain, its geographical isolation. Whenever the sea was an unfriendly frontier, as was the case for most of the island's history, the Amorgianoi had to rely on their own limited resources. The architectural tradition of the island emerged from a subsistence economy where agriculture, animal husbandry, and fishing were the only sources of income. The limited agricultural potential of the island was further restricted by severe earthquakes, epidemics, famine, and bad harvests.

**THE ORIGINAL \textit{SPITI} DWELLINGS**

A local saying, "a house merely enough for one to fit in, but a field as far as one's eyes can see," best reflects the high priority given to agricultural production in the design of the original dwellings on Amorgos. The use of local stone and wood, the only available materials, also led to structural and morphological details such as vaults, ceilings, ovens and chimneys that were extremely standardized (FIG. 8, 9). The early architecture of Amorgos was also characterized by the lack of any kind of non-functional consideration.

The \textit{spiti}, the interior of the original house, comprised a single space that appeared from outside as a single volume covered by a flat roof (\textit{doma}). This single-volume house has been referred to as a \textit{monospito}, "single house," and has been celebrated as "the original type of the Cyclades."\textsuperscript{23} A number of lower multifunctional volumes were normally combined in a horizontal and vertical arrangement adjacent to the \textit{spiti}. No waste in stone or wood was permitted, and each function was provided its own volume and roof, the height and dimensions of which were kept to the required minimum. Such volumetric differentiation, assisted in most cases by a steep slope defining the curved corners of dwelling lots, created a great variety of possible spatial compositions (FIG. 10).

While rural dwellings could easily expand horizontally, space was more constrained in towns. This led to a condition where the majority of the older in-town dwellings on Amorgos, as exemplified by one group in northern Chora (FIG. 11), were extremely long and narrow, built in rows so as to share their long sides with one another. This urban form arose for good reason. Structurally, elongated walls facilitated the construction of ceilings that spanned only a short distance. A narrow, solid configuration also provided resistance to earthquakes and presented a solid facade to raiding pirates.

In contrast to other Aegean-island dwelling types, the single-storied \textit{monospito} was entered on its narrow side and was

known as \textit{stenometopon}, "narrow-facaded."\textsuperscript{24} Entrance came through an open courtyard (\textit{avli}), often through a transitional covered space (\textit{brostia}). One author has compared this latter architectural feature to the ancient Hellenic \textit{prothalamos} or \textit{prosto-on portal}.\textsuperscript{25} A bread-baking oven (\textit{fournos}), with its chimney (\textit{fanos}), often occupied one side of the \textit{avli}, while a washbasin and a little cistern usually were located on the other. (Alternatively, where courtyard space was limited, bread was baked in special, privately owned furnaces, gathered in locations throughout the town known as \textit{fournaria}.) The courtyards of larger dwellings also contained smaller volumes (\textit{paraspita}) used as barns for mules and donkeys, goats, and chickens (the smallest of these were used as pigsties).
A. Hadjimichali has presented drawings of two interiors that are said to be representative of the traditional architecture of Amorgos. It will be shown, however, that certain stylistic elements of the two dwellings would seem to place their construction in the mature years of the formulation of the local tradition, probably following the return of the population in the mid-sixteenth century. This would explain why examples of these two types can still be found in good condition in Chora, Langada and Tholaria. In these places, they comprise the majority of single-story dwellings and the basements of buildings that have since had second-story additions.

The interior of the first type of monospito comprised but a single space where the entire family once performed all its functions (FIG. 12). In the example, this can now be reached from the avli through an arched brostia that supports the terrace of a later second-story addition. The facade wall is divided into the entrance space with the door, and the cooking space/fireplace (parastia) — now located under the brostia. A number of built-in, multi-purpose closets (parathyres) are located on the sides of the unit, while the narrow back wall accommodates a wooden structure called the apoacrevatos, a horizontal surface raised 1.2 meters from the floor, on which the entire family once slept. On top of the platform, a curtain separated the children’s space from the couple’s space, and another curtain blocked the apoacrevatos from the rest of the room. The space

FIG. 8. (OPPOSITE PAGE, LEFT) A rural complex at Syvrista, Amorgos. Availability of local materials led to standardized details: a fournos and, behind, a boudospito. The spiti, the main residential volume, can be seen in the background.

FIG. 9. (OPPOSITE PAGE, RIGHT) Chora, Amorgos: a chimney freely revealed on the dwelling facade, an example of the local morphology.

FIG. 11. (ABOVE) In-row dwellings from Chora, Amorgos, unified and belonging to kin members. Showing: (1) broskia pathway, (2) mouskos bake-oven, (3) modern WC added to the courtyard, (4) recent opening joining the two properties, (5) parastia fireplace, (6) mainspiti, (7) apocrevatos, (8) mainspiti of second dwelling, (9) apocrevatos, (10) new concrete storage blocking the old avli, (11) what is left of the old basement of an original two-story dwelling that collapsed and is now used as a storage area.

FIG. 12. (MIDDLE) Ground floor plan of a typical monospito from Chora, Amorgos. Showing: (1) avli, (2) steps to floor which was recently added, (3) broskia, (4) patoska fireplace, (5) former kitchen where the bake-oven used to be, now a WC, (6) spiti: (a) crevatos bed, (b) storage under the crevatos, (c) pangos, (d) parapangi, (e) bari.

FIG. 13. (RIGHT) Ground floor plan of a typical monospito-cum-doxari: single house with an arch. Showing: (1) entrance from street, (2) avli, (3) cistern, (4) washbasin, (5) lourmos bake-oven, (6) entrance to spiti, (7) spiti, (8) parastia fireplace, (9) the opening of the fanos chimney, (10) parathyra built-in closet, (11) the bed of the apocrevatos, (12) the storage space of the apocrevatos, (13) doxari, (14) holes for tree branches, (15) secondary tree branches, (16) reeds, (17) night closet next to bed, (18) wooden frame of apocrevatos with curtain, (19) wooden partition of storage space.

below the apocrevatos was used for storing cereals, oil, crops and other supplies, and was reached through a low door, approximately 0.8 meters high. The upper level of the platform was reached by two steps: a low bench (pangos) where linen was kept, and an even smaller wooden box (parapangi) where valuables were stored. Storage was also possible in a sofa called the bari, on top of which children also slept. Structurally, wooden beams were used to bridge between the long walls of the first type of monospito. Thinner timber joists or reeds were then placed cross-wise, and a layer of seaweed was added for insulation. Finally, the flat surface of the roof was formed by layers of hard-packed, broken earth.

Where wooden beams could not bridge the distance between long walls, the second type of monospito evolved (FIG. 13). This featured a large stone arch (doxari) built as a support running parallel to (and in-between) the long sides of the house. The doxari allowed for the monospito to be wider and incorporate greater ceiling heights. It also allowed for the construction of a double apocrevatos, or an apocrevatos and a storage space, and the creation of distinct areas for the parastia and the entrance door. In time, the apocrevatos of this monospito-cum-doxari...
type of dwelling became more and more elaborate (FIG. 14). The kitchen with the parasitia (sometimes combined with the fournos) also began to develop as a separate room in the courtyard, and came to be known as the mayerio. Over time, this second type of dwelling became ever more dominant, eventually appearing in rural areas as well as towns. The apocrevatos also began to be replaced by a structure known as the rio. The concept of the rio was similar to that of the apocrevatos, except that the rio, like a stone coffin, had a top which could be raised to allow storage of family valuables.

An advanced form of this second type of spiti dwelling derives from an area called Skeparnies in the Kato Meria. Its interior combined a wooden apocrevatos with a stone rio, and it contained a large arch that separated the kitchen area (with its parasitia from the apocrevatos (FIG. 15). In this form, the crevatos (the bed of the apocrevatos) was clearly distinguished from the storage space by a thick stone wall. A number of lower volumes surrounded the spiti and were reached from the courtyard. The fournos became a distinct room, and a transitional space (brostiada) gave access to a small animal quarter (boudospito) and a hay-loft (ahironas). The boudospita was used for goats, donkeys and mules, while larger animals, such as cows, were kept in the fields in fenced-in enclosures known as mandria. A chicken coop and pens for pigs also formed part of the group. Such subsidiary structures were quite stan-
standardized in their detailing. For example, a large column known as a pinsos was located in the center of every boudospito so that the animals would not attack each other. The roof of this structure was constructed using wooden beams to span out in all directions, joining the pinsos to the perimeter walls.

One of the most representative cases of rural dwellings — one that is suggestive of the early phases of the evolution of town dwellings, as well — derives from Agia Thekla, a fertile site on the eastern coast of the island (FIG. 16). This complex is not inhabited today because a violent earthquake shifted Amorgos' underground water resources in 1956 and caused the wells of Agia Thekla and nearby Lefkes to dry out. But the significance of this rural complex lies in its composition, the freedom of its volumes, the roundness of its stone structures, and the unstructured spatial relationships of its interior. For example, its apocrevatos comprises a caved area whose shape is defined by the curve of rocks into which the dwelling was built, and the parasita is on the long side, in proximity to the apocrevatos, while the rio is in the opposite corner. But most importantly, the dimensions of the spiti are limited in comparison to the space allocated to the other functions, signifying that the house was used only as a shelter in the winter and at night.

Similar features can be found in a number of dwellings in the northern part of Chora, the old core of the settlement. Their curved, non-stylized walls can be as thick as 1.1 meters. Their ceilings, similar to the ones in Agia Thekla, are timber joists formed from the branches of an aromatic tree, the fides. And their roofs are formed of smaller branches laid on top of the fides and covered with reeds or irregular stones.

These features also characterize the few remaining original two-story dwellings in Chora, which are gathered mostly in the castle area. These were built where the shape of lots was difficult, as where they were very deep or where they incorporated a significant slope. In such circumstances, the space below was mainly used as a stable and a storage room, and the main residence, the spiti (with all its traditional elements), was located on the upper level. Such a configuration meant setting the spiti back from the street to allow for an open or covered courtyard long enough to accommodate a steep stone staircase. A covered archway (brostidada) supported the staircase and the entrance terrace to the floor above. This dwelling type appears to be a direct translation of the monospito form in height, although there are reasons to believe that it preceded it.

**THE ARCHONTIKO WITH SALA DWELLING**

A major shift in the economic orientation of the Cyclades islanders occurred as early 1645, at the time of the Turco-
Venetian wars, which signified the decline of Ottoman maritime power in the Aegean. The shift toward commerce and navigation was encouraged by a new privileged status offered to all islanders by the Ottoman Sultan Murat III in 1580 through special capitulations known as ahidname.28 The shift was also supported by massive immigration to the Cyclades from continental Greece during the sixteenth century.29 On Amorgos, this shift in economic outlook reached its peak toward the end of the eighteenth century following the 1774 Treaty of Kucuk Kaynarca between the Ottomans and Russia.

Up to this time external influences on the architecture of Amorgos had remained limited. The principal conquerors of the islands, the Latins and the Ottomans, had shown no intention to colonize it. But during the course of the eighteenth century, the wealth brought to Amorgos led not only to an expansion of settlements outside medieval boundaries but to an evolution of dwelling types to match European standards of living. This change was initially limited to the major towns and coastal settlements. It did not reach the countryside until the beginning of the twentieth century.

The modification of dwelling traditions was facilitated by highly specialized masons, sinafi (from the Turkish, sinif), who came to monopolize building activity on the island. Each guild had its own creative style within the marginal traditional framework. The masons built multi-room, multi-terraced, multi-courtyard buildings called archontiko that incorporated Italian Renaissance and, later, neoclassical elements into their facades (FIG. 17). They generally took the form of two-story units, with the residence on the upper floor and the ground floor devoted to an assortment of wells, olive-oil presses, wineries, stables, store-rooms, hay-lofts, and other supporting areas and equipment (FIG. 18). In these dwellings, the traditional courtyard (avli) was shifted to the upper level and became a terrace called a veranda (FIG. 19).

The main characteristic of the interior of this new type of dwelling was a living/guest room (sala) which occupied the entire facade of the house and came to replace the spiti. Two symmetrical doors opened from the sala to the bedrooms (kamares), while the kitchen (kouzina) became a separate room inside the house. All the terms used for the new spatial elements — veranda, sala, kamari and kouzina — were of Italian origin, yet construction materials remained stone and wood, and the structural details such as arches, openings, and ceilings remained the same. The new rooms were created by subdividing or uniting old spaces, thus maintaining underlying proportion systems.

The new style was adopted even among smaller dwellings that were imitations of the larger archontikos. This led to the creation of a new monospito-cum-sala type of dwelling that followed the existing traditional principles in its exterior, while superimposing the sala-bedroom internal pattern on the traditional interior. Using this pattern, growth could be accommodated on existing monospito structures by adding a second floor for the main residence with its sala and bedroom(s) (FIG. 20). In such cases, the kitchen with its parastia remained on the ground floor, as did other spaces of secondary function (FIG. 21). The ground floor could also be used as a winter residence because it had a fireplace. In cases where vertical expansion was not feasible, growth occurred through unification of neighboring units.

FIG. 17. (LEFT) Elaborate archontiko from Chora, Amorgos.
FIG. 18. (BELOW) Complex ground floor/basement of an archontiko on the main street of Chora, Amorgos.
FIG. 19. (ABOVE) Upper floor plan of an archontiko in Chora, Amorgos. Showing: (1) entrance from street projected from the ground level, (2) staircase leading to floor, (3) upper veranda, (4) sala living room, (5) kamari bedroom, (6) and (8) parts of the old sala that was subdivided into a waiting room and sitting room, (7) kamari, (9) kamari, (10) old kitchen with the fireplace. Letters indicate modern concrete alterations: (A) wc, (B) corridor to wc, (C) leading to bridge, (D) over the street, (E) new room rented to tourists.

FIG. 20. (TOP RIGHT) A monospito-cum-sala (to the left) next to an old two-story monospito with apocreevatos type: from Chora, Amorgos. Showing to the left: (1) avii, (2) spiti, (3) sala, (4) place of old apocreevatos, (5) kamari, (6) old kitchen, (7) old fireplace, (8) new concrete WC added to the kitchen. To the right: (1) avii leading to basement, (2) steps leading to floor to open terrace, upper avii, (3) the old spiti with an arch (4), (5) old kitchen, (6) parasstia fireplace.

FIG. 21. (BOTTOM RIGHT) Plan of floor addition on top of the monospito with apocreevatos dwelling of FIG. 12. Showing: (1) ground floor avii, (2) steps to floor, (3) free chimney exposed on the upper floor dwelling facade, (4) upper floor veranda, (5) sala, (6) kamari.

FIG. 22. (OPPOSITE PAGE, LEFT) Modern technology incorporated into the old structures: Chora, Amorgos.

FIG. 23. (OPPOSITE PAGE, RIGHT) Modern addition to an old stone made spiti: the concept of the corridor.
A NEW CONCEPT IN SPACE

Toward the second half of the twentieth century, a number of significant events put an end to quite a few of the traditional occupations of the Amorgians and many of their old ways of living. Such events were the electrification of Amorgos' major towns in 1966, the installation of running water in 1971, the foundation of a post office in Chora and phone marts in Chora and the ports of Katapola and Egiali, and the construction of autoroutes joining the major centers of the island. Simultaneously, the Greek government instituted a new system of naval routes from Piraeus in order to put an end to the isolation of islands like Amorgos. Increased contact with the exterior was followed by tourist development, currently at a peak. Inhabitants of the island now perceive the provision of tourist services as being a more profitable and less trying way to earn a living than working the rocky land.

In terms of the local architecture, improved transportation has made possible the use of concrete, bricks, and modern tools imported from urban centers; and in many cases these products now provide a cheaper way of building than do local techniques. To accommodate the yearly increase in tourists, the interiors of existing dwellings have been transformed into hotel-style suites or individual apartments with kitchens and bathrooms. New two- and three-story concrete motels are also springing up both inside and on the outskirts of the island's main towns and ports.

It is now also possible to use new technology to alter old, decaying structures. For example, the replacement of old rotting wooden ceilings with concrete slabs is now seen as an easy way to solve the problem of deterioration and infestation with mice, especially when old master craftsmen in stone and wood are difficult to find and costly to hire. Building full bathrooms in courtyards where bake-ovens used to be, and enlarging kitchens and furnishing them with modern equipment, are other minor, but very common, alterations. It is less common to see major house extensions achieved through building over ruined property. But in some cases such modifications have succeeded in assigning a local morphological style to the modern addition, as well as incorporating advanced technology into an old stone structure (FIG. 22).

Economic constraint and introversion originally gave rise to the autochthonous forms of dwelling environments on the island, and eighteenth-century commercial involvement subsequently led to their enrichment and reorganization. But within the last decade Amorgos has begun to experience the first signs of a departure from local morphological systems. New dwellings, built as residences for the local population, now follow an international architectural style that seems
more suitable to new occupations and lifestyles. While the majority of dwellings in the towns on the island are still of the *salai kamari* type, and a few of the *apocrevatos* type may still be found in the rural areas, a new concept of space is slowly being introduced, that of the corridor which leads to a linear arrangement of rooms on both sides, following the example of Athenian apartment complexes (FIG. 23). This linear, sequential organization of space is replacing the traditional concept of a principal *spiti* or *sala*. Externally, the new organizational concept has resulted in an elongated balcony that is taking the place of the ground-floor courtyard, the *avii*, and its later second-floor translation, the *veranda*.

REFERENCE NOTES

6. For an extensive discussion of the definition of syntax, the continuum of semantics, and an elaboration of morphic languages, see B. Hillier and J. Hanson, *The Social Logic of Space* (Cambridge: Cambridge University Press, 1984), pp. 32–51.
8. A. Colquhoun, "Form and Figure," in *Oppositions* 12 (Spring 1978), p. 33.
10. For a description of the process of transmission, see J.P. Bourdier, "Reading Tradition," in Bourdier and AlSayyad, eds., *Dwellings, Settlements and Tradition*, pp. 35–53; also see P. Oliver, "Handed-Down Architecture: Tradition and Transmission," in ibid., p. 74. Oliver writes: "... there is no such thing as a traditional building, no larger field of traditional architecture. There are only buildings which embody traditions."
15. Travellers like Edrisi mention Amorgos among the islands undergoing demographic growth earlier in the eleventh century. This matches Bogiatzides' theory placing the foundation of Chozoviotissa during the period of the iconoclastic controversy, when the Cycladic islanders seem to have been prosperous enough to maintain their own navy against the iconoclast Byzantine state. An assumption ought to be made that Amorgos received a number of settlers from Crete and other major islands, which were more desirable prey for pirates, while additional settlers came to the island through monastic colonization in the eleventh century. For repopulation and the foundation of the monastery, see I.K. Bogiatzides, *Amorgos: Historiakas Ereunai peri tes Neos (Athens: Typoi P.D. Sakellarizos, 1918); Meliarakes, *Hypomnemata*, pp. 33–44; E. Kolodny, *La Population des Isles de la Grece: Essai de Geographie Insulaire en Mediterranee Orientale* vol. 1 (Aix-en-Provence: Edisud, 1974), pp. 153, 180, 183–8; E. Malamut, "Iles de..."
la Mer Egee de la Fin du XIe Siecle a 1204," in Byzantion (Brussels, 1982), tome 52, p. 336; and more recently, L. Marangou, Moue Panagias tes Chozoviotissas, Amorgos (Athina: Hypourgeio Aigaiou, 1988).

16. These are Amorgos, Egiali, Tholaria, Arkesine and Vourous.


19. For the Latin occupation on Amorgos, see B. Slot, Archipelagus Turbatu.s: Les Cyclades entre Colonisation Latine et Occupation Ottomane 1500—1718 vol. 1 (Istanbul: Netherlands Historisch-Archaeologisch Institut te Istanbul, 1982), pp. 16, 38—9; Kolodny, La Population, p. 183; Hauttecoeur, L'Ile d'Amorgos," p. 171; Bent, Aegean Islands, p. 332, 352; Me liarakas, Hypomenatha, p. 35. For the Ottoman conquest of Amorgos, see Slot, Archipelagus Turbatu.s, p. 73—4, 78. For refuge, emigration and return of population, see Slot, Archipelagus Turbatu.s, p. 284—5; Hauttecoeur, L'Ile d'Amorgos.

20. The threat eventually came to include Christian pirates from Italy and Malta, and even Greeks (mainly from the Peloponnese), in addition to North African Muslim corsairs. Due to the number of its deep bays inaccessible by land, Amorgos was a particular stronghold of piracy in the Aegean from antiquity to the formation of the modern Greek state. The Amorgianoi, themselves, were reportedly involved in some piratical practices. For an extensive discussion of the effects of piracy in the Aegean under the Byzantines, the Latins, and especially the Ottomans, see A. Meliarakes, Kykladika (Athens: Typ. Hellenikes Laographikes Hetaireias, 1897); also Malamut, "Iles de la Mer Egee," pp. 313—6; Bent, Aegean Islands, p. 470; Kolodny, La Population, pp. 112—7; Slot, Archipelagus Turbatu.s, pp. 20—2. For Amorgos in particular, see Meliarakes, Hypomenatha, pp. 63—71; Hauttecoeur, "L'Ile d'Amorgos," p. 170.


25. Ibid., p. 27.


27. The historical and physical data in support of this cannot be presented here due to the limits of this paper. They form part of the author's forthcoming dissertation through UCLA (September 1990).
