



EUROPALIA

PORTUGAL

synthesis of portuguese culture

ARCHITECTURE

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1.

INTRODUCTION

NOTIONS AND AIMS; CONTENTS AND METHODOLOGY

The aim of this essay is to show the evolution of architecture and urbanization in Portugal, a small country in the extreme south-west of Europe with a long history and defined geographical area.

The aim is to draw a picture of a «culture developed from Portuguese roots» throughout a «long period of time», with all its natural virtues and limitations.

But some questions must be asked beforehand, both regarding the nature and the aim of the study and the method and contents followed and recommended.

The first question is if we should deal with the subject «Portuguese architecture» or only «architecture in Portugal». We opted for the former, as we think that it has been sufficiently proved (as will be shown in the following chapter) that there is an original production that is representative of Portuguese culture, rooted in time and in the perfection of its own values. The farther afield one goes in dealing with the architecture developed outside the country itself, in the areas colonised by the Portuguese in the period of overseas expansion, the easier it becomes to understand.

A survey of «Portuguese architecture», therefore, will imply a systematic and detailed reference to its historic development in the overseas territories, not only those that are still closely linked to mainland Portugal, as is the case of the archipelagos of Madeira and Azores and Macao, as well as a more summarised reference to other areas that had these same links some years ago, such as Goa, Damão, and Diu in India and some African countries. The architecture of the other large areas of «colonization» such as Marocco, Brazil, the Middle and Far East and India/Ceylon must not be forgotten. But it is not our intention to deal with the type of colonization carried out by

the Portuguese, which was unique in its philosophy, both from the point of view of the period of occupation and in the «multiplicity of powers» and the miscegenation that was a part of it.

To sum up, we may say that a deep understanding of Portuguese architecture and its evolution must be obtained through a global approach to the subject, including the architecture of both mainland Portugal and the rest of the world.

The second question is what one should understand by the concept of architecture. Our interpretation will not place features of architecture and urbanization in watertight compartments as they are historically inseparable and complementary (although our wish is to place more emphasis on architecture).

Neither do we intend to make any distinction between the cultural features of erudite and popular architecture, as such a distinction cannot be legitimately made in many cases in Portugal, where the two concepts and methods of building tend to articulate in the evolution of each style.

Finally, we shall try, wherever possible, to strike a balance between the study of «monumental» edifices which can be mainly found in religious, military and civil architecture and the so-called «current» buildings, especially those in the field of habitation. This attitude is justified by the interest and importance that the latter has been assuming and by the contribution that the study of housing programmes makes to the understanding of places and the complexes constructed, somewhere between the extensive theme of the city and the isolated theme of architecture.

The third approach has to do with the reading given to the History, we are writing. It is, in the first place, OPEN to an up-to-date survey, in a time that we may name «Post-New History», in which we must necessarily count on the usefulness of a chronological reading as well as the importance of an «episodical» reading, i. e., applying concepts by conjugating the theme «style» with the factor «typology», or, in terms of methodology, conjugating the role of «circumstances» with that of «structure» in the understanding of events and facts.

It is also MULTIPLE, i. e. it accepts multiple approaches, so that it becomes pluri-disciplinal, or, even better, interdisciplinal, as it draws on the various areas of learning that are most needed: Geography (relating the geo-morphological and climatic context with the processes of urbanization and construction, or the environmental

materials available with the buildings that are constructed); Architecture (surveying and designing the objects being studied in a tridimensional reconstitution or producing a visual and global representation of urban spaces; Anthropology (comprising collective values beyond their chronology — or the urban-architectonic elements that remain immutable in time — on a basis of a «structuralist» interpretation which is, after all, the complementary «search for the invariants between superficial differences» in the words of Levi-Strauss).

Other auxillary disciplines of History which are essential for the overall coherence of this study must also be used, such as Archaeology (which identifies the existing concrete material elements), Aesthetics (which interpretes each object as a «work of Art'), and Bibliography (the background and documental base, which is here presented according to the theme of each chapter). The fundamental «anthropological» orientation of our «historical» interpretation must also be stressed, as we see these two fields of knowledge as crucial and complementary for a correct reading of the evolution of Portuguese Architecture.

As a material result of the sedimentation of knowledge and production of successive historical periods in the present, the architectonic and urban heritage of Portuguese roots can, in our opinion, be seen from different points of view and approaches that may enrich our knowledge of it.

The sequence of the chapters of this work has been organized on this basis. Following the introduction and an explanation of the methods and concepts used in the first chapter of this work, the second looks at the «Regular Features and Characteristics of Portuguese Architecture» from a systematized and conceptual point of view, beginning with the authors that have written on the subject, within a geo-cultural framework of the Iberian Peninsula and in the relationship established with Portugal's overseas territories throughout the centuries. It is within this framework that the regularity of certain features and identifying factors can be seen.

The third chapter is to be seen as a basic and systematic point of reference in strict chronological order, as it summarizes and sets out the development of Portuguese architecture in three basic periods of time: «From Pre-History to the End of the Middle Ages», «From 1500 to 1780» and «From Neo-Classic to the End of the 20th Century». Alternating between references to the context of the Iberian Peninsula and the evolution in the overseas territories, it clearly deals with the architectural environment.

The fourth chapter is a deeper and more detailed selection of «Great Works and Great Authors» that have left their mark on Portuguese architecture, approached from a purely Iberian point of view. The emphasis is placed on the work itself and on its author, although there are some cases of authors «without work» and works «without authors». It was decided to make a reading of the pieces chosen as «works of art» or as «crucial themes» in the evolution of Portuguese architecture.

The fifth chapter, «Popular Architecture — a Regional and Traditional View of Portuguese Space», seemingly an antithesis of the previous chapter, must be seen more as a means of calling one's attention to the importance of the vernacular and anonymous contribution of the constructions springing from Portuguese roots and the way it has depended on and developed from the land, the geographical situation and its dispersion.

The sixth chapter, «The House in Portugal — A Reading of the Evolution of the Typology of Housing», is a basic investigation on the theme of habitational space, an area that is more and more crucial in order to understand the adjustment of space in collective terms and as a cultural means. The investigation follows the current chronological scheme in the enumeration and characterization of the successive models used.

To close this work, the seventh chapter also makes a chronological reading of «Urbanization of Portuguese Roots», summarised in a similar way to the third chapter (on architecture). It successively refers to the origin of «A Characteristic Mode of Producing Cities», the apogee of the «Portuguese City in Expansions» and the modernising «Transformation of a Model». Seen as a complement to the previous chapters, this one stresses the dimension and the value of the «city as architecture», a very intrinsic aspect of space in Portugal, which is almost always «worth more as a whole» than for its individual pieces.

As a final note, it must be pointed out that the images have been chosen with the intention of «adding» values and strengthening the meaning of the «spirit» of each chapter and not simply as a mere complementary illustration.

2.

REGULAR FEATURES AND CHARACTERISTICS OF PORTUGUESE ARCHITECTURE

Several authors and investigators have given their opinions about the possible characteristics and the originality of «Portuguese Art». As it is a very subjective subject, nobody has yet managed to synthesize it or find a unifying theory of the intrinsic values of «our character» that stand out. They have instead tried to find clues or follow trails at various crucial moments of our history and, demonstrating different degrees of resistance to falling into the trap of conceptual generalizations, they have tried to infer a sense, foresee a tendency, a spirit, in short, a culture.

The reasons for this research is deeply rooted in a constant need for a «national identity» (the fruit of an old and collective insecurity?) which, in art and architecture, as well as in other fields, searches for a «space» and a «time» that can be culturally recognised as ours. This search has caused innumerable polemics, especially in the last 100 years, in books and articles, pamphlets and complete works, from the «Portuguese House» to the «Panels of St. Vincent» or the «Exposition on Raul Lino».

This search for the regular features of Portuguese architecture must be inserted and understood in an indispensable grouping of authors and the classification of their conclusions and purposes. Statements on the theme must be placed in the general context of Iberian architecture, in the contrasts between the «southern» and «northern», «western» and «eastern» forms, as all of them have reflexes in the case of Portugal.

The Iberian Context: Analogies with Spain

Chueca Goitia managed to synthesize what he called «genuine invariants» in Spanish (Castilian?) architecture. Although the existence of

some clear contrasts between this architecture and the one with Portuguese roots has to be recognised, as happens with the urbanization of the two countries, there is an Iberian and southern «common background» that cannot, neither should not, be cancelled out or forgotten.

It therefore makes sense to enumerate the regular features pointed out by Goitia, who, in fact, preferred the word «invariant», taken from the mathematical Theory of Groups, to «regular», because he recognised in the former «on the one hand its amplitude, more than mathematics, metaphysics, the concept of the invariant, and on the other its flexibility, its validity conditioned by certain situations, configurations, transformations, etc. Something regular, in mutation, is something stable, something immutable that responds to no special situation nor special calling».

As recurring themes of Spanish architecture, Goitia refers to the «compartmentalized space» (which recalls the «cellular compositions» that George Kubler speaks about in regard to Portuguese «plain style» i. e., the constitution of a global structure with several spaces that are autonomous but juxtaposed. He talks about «a particular sensibility to create these interlinked and asymmetric compositions of fragmented lines» or, in other words, the taste for creating spaces without any clear sequence or continuity. He also says — in one step farther in relation to the above remark — «an external volumetric expression of great simplicity [...] that, using a crystallographic term, we would call macular architecture» (i. e. with an exterior expression in dense and «flattened» volumetry).

Goitia also talks about other invariants: for decoration, which he considers to be «absolutely flat» and «suspended» (where he sees roots and influences of Muslim and Oriental origins); he mentions «the sincerity and the truth of the volumes» inherited from the Mediterranean and Islamic architecture; he refers to the inherent notions of proportionality, on pointing out the «value of the square as an invariant in the Spanish architectonic proportion; that which we call the squareness of our architecture» (and here we immediately recall Lucio Costa's statement regarding the static forms and the inherent «squatness» of Portuguese architecture, a characteristic he termed «carrure», which can be loosely translated as «squareness» Goitia sums up the mentioned values with the words «flatness, horizontality, cubicity». In one way or another, all these expressions are directly or indirectly inter-related with the «character» of Portuguese architecture, as we shall see in the opinions of Portuguese writers on the subject.

Some Regular Themes

In the opinion of Manuel Rio-Carvalho, the INTEGRATOR and TRADITIONALIST aspects of our architecture are important: «Although Portuguese art has evolved through a series of imported artistic movements, I think that its specific tone comes from a mental operation through which an attempt is made to integrate the main streams into an earlier context that has become known and controlled [...] the urge to preserve and to innovate and the urge to conciliate these trends is the basis of the great originality of Portuguese art: originality is not an *ab initio* creation, but is achieved through an intellectual alchemy [...] the process by which a structure, which implies a whole system of relationships, is tenuous until it takes on a form reveals the urge to integrate the modern with the traditional, the known with the unknown, thus giving it a new meaning that is different from the original.»

Rio-Carvalho makes these observations with art nouveau as a backdrop. But José Augusto França stresses the traditionalist character — which he calls CONSERVATIVE — of our architecture, in a much wider time context: «In a country that had fused Gothic into its Manueline and the 16th century and Mannerism into Baroque, with good reason the European style of the 20's (of the 18th century) was still cutting a fine figure as 'modern' 30 years later [...] The basic characteristic of Portuguese architecture has always been its conservative style [...]» And, confirming the idea of the tendency to integrate European artistic trends into our architecture, we can mention Pais da Silva, who stresses the latter's ADAPTIVE capacity in regard to Gothic, in which «the models imported were soon rethought with originality and such power that their adaptation gave Portuguese Gothic architecture a very special form».

The traditional and integrating character is also mentioned by Maria João Madeira Rodrigues in the context of the city as an «object of art», thus establishing a link between the common components of architecture and urbanism: «On the one hand (the population of Lisbon), is integrated in a new industrial order and is its own agent and motive power; on the other hand, still tied to their rural customs and due to the inherent contingencies of Lisbon's urban evolution on the outskirts of the city, the people cling to an archaic inheritance of habits and customs that leads to a revival of an old system [...]»

Opinions are more varied in regard to the BAROQUE character of Portuguese architecture, as there is a tendency to place that concept against the idea of formal and spatial SIMPLICITY. In the opinion of Rio-Carvalho, it must be stressed that «this decorative arsenal is going to be used to decorate the facades of buildings and the surfaces of pieces [...] in a plastic concentration that causes a violent contrast with the background, a very inherent Portuguese Baroque feature in artistic transformation». It is interesting to note the role of decoration, which functions as a kind of mediator between structure (space) and form (surface). In the poverty (or sobriety) of Portuguese artistic production, the facade would assume a vital importance as an «introduction» to the building, as if the surface wished to become three-dimensional space and structure.

In contrast, Pais da Silva points out the anti-Baroque character of Portuguese art: «At various times in its history, Portugal was the physical support of an architecture of notable personality in the context of European art. It was endowed with special features [...] [with] forms submitted to a severe geometric and profound anti-Baroque composition, therefore making it very national.» Speaking about the late medieval period in another text, the same author says: «It is both the simplicity of forms and the structural clarity that can best describe our Gothic churches from the 13th century on and our Manueline buildings.»

We think, however, that there is no real contradiction in the opinions of these two authors. Rio-Carvalho speaks about the use of decoration, which is «Baroque-like»; but it is implicitly understood to be a contrast to a plain background, which is what, after all, Pais da Silva considers to be anti-Baroque. Raul Lino sums it up thus: «Another feature of our way of being is the tendency that we have to conceive everything on surfaces [...] for our disdain for the importance of volumes and the little interest we show for light-dark.»

And the style that best bears out this statement is undoubtedly Manueline — «Atlantic Baroque» (as it has been called) in its decoration, but being of a rare clarity and simplicity in structure — as a process and agent of the decomposition of the construction of the Gothic organism in the simple volumes and forms of which it was composed...

A third component — besides the «integrator feeling» and the taste for «structural clarity» — has necessarily more to do with the contents of the material models in question, which have historically appeared in our culture.

In fact, there is a long tradition of «opposition» among «visions of the world» in Portuguese architecture that have been translated into concepts and models and have produced a kind of «dialectic» creative relationship. Speaking in a general sense about the Middle Ages, José Mattoso explains the differentiating aspects of the cultural values of the south (Mozarab, municipalist and urban) and the north (Christian, landowning and rural), respectively influenced by the Mediterranean and the Latin and Muslim worlds and Northern and Central Europe where Anglo-Saxon and Germanic values predominate.

Throughout history, this can be seen in both the use of space and the architectonic production of the country. The division between the north and south is either the River Tagus or Douro, Romans and Celts, Visigoths and Suevi, Mozarabs and Christians, Gothic and Romanesque, courtyards-arcades and sanctuaries-stairways, the works of Mardel and Nasoni, the architecture of «Lisbon» and «Oporto»... [...]

Orlando Ribeiro expressed this opposition with a very clear geomorphological and territorial picture, speaking about a southern «clay civilization», plastic and pliable, as opposed to a northern «granite civilization», rough and «hard», and a «Mediterranean Portugal» against an «Atlantic Portugal». It is, in fact, what Agustina Bessa Luis ironically termed the opposition between the spirit of the «Caliphate» and the «Hanseatic League». Or, in the words of Raul Lino, that which represents the contradiction between a serene, luminous and balanced «pediment» and the teluric, dynamic and tense expression of the «swastika».

This BIPOLARITY of values seems, since the beginning, to have fashioned a collective understanding and sensibility — reflecting, after all, the reality of a peripheral country divided between «south» and «north» — a fact that has left its mark on both architecture and the cities throughout the centuries and may have been transposed «over-seas» in the process of expansion.

This bipolarity is further emphasized by other clearly detectable opposites, such as the contrasts in the relief of the country. The «Interior» is rugged and Iberian, centripetal and Hispanic (from the Trás-os-Montes to the Algarve Mountain Range), while the «Litoral» is inviting, sheltered and sunny, like a «centrifugal» force that encourages the idea of «travel» or departure, as is seen in the material interpretation of the models that are patent in the contrast between the weight of the «vernacular feeling», of a popularising and simplifying tendency of forms and spaces, against an erudite and elitist reading.

It is exactly as AGGREGATING agents, of structural compensation and redress, that the role of what might be termed «national styles» can be understood. In fact, the «Manueline» (a reaction against the ambivalence of the preceding Romanesque and gothic), the «Plain» style (against the opposites created within classicism from the Renaissance to the Baroque) and the «Pombaline» (the initiator and the vanguard of a proto-modernity in the «century of enlightenment» and which continued in civil construction programmes until the end of the 19th century in order to attenuate the successive waves of «Rocaille», neo-classicisms and even the «neos» of Romanticism) annulled these territorial differences for a long time.

Some Conclusions

We can conclude with some synthesized observations that summarise the above mentioned opinions:

— The social and cultural situation of the country is an individual case, being «original» in the European context owing to its «fringe» or «peripheric» position in relation to the main European centres where the cultural «vanguard» movements are launched, thus creating a tendency to maintain long-established traditional models, so that, together with Spain, there is a tendency against revival, together with a parallel trend for integration, as this is the only thing that can transform and overcome the fatal conservative leaning;

— Imported models have exerted a great influence on the evolution of artistic processes in Portugal in comparison to similar processes in other European countries and these continual influences can be clearly seen: as a result, Portuguese architecture has been marked by alternate phases of «imported» and «home-made» trends throughout its history;

— In this way, the fashions frequently imported from the above mentioned cultural centres have not been directly applied to Portuguese architecture, except in an initial phase when they were still a novelty; although accepted with an eclectic, or even aleatory, attitude, they have been more often than not transformed (rethought, adapted) in some way and finally integrated with a new traditional feeling in which the «already known» is crucial;

— The application of an «elementary spatial structure», of «clear and simple lines» and of the «decorative treatment of the surface» have been outstanding in this process of incorporation; the last-named value maintains a dialectic relationship with the other two, being a kind of decorative response to the desire for an architectural complexity that limited resources make almost impossible in practice;

— Territorial differences and contradictions can be clearly seen in both architecture and urbanism — especially if we take into consideration the small area of the Iberian Peninsula that Portugal occupies — in which the contrasts in the understanding of forms and spaces, and even the oppositions created by these distinct influences, have played a catalysing and dialectic role; the temporal alternation between the «cycles of opposition» distinguished by an accentuated «bipolarity» and the periods of «synthesis» and «aggregation» of languages and models have solved this contradiction; — finally, the «open» character of Portuguese architecture and the feeling and taste it has in being the «transmitter» of previously elaborated models must be stressed, whether it be in the process of internal colonization or, above all, in the overseas expansion, in which an «inate taste for building» in order to create a collective material base could always be seen. It is here, in our opinion, that one should look for the «essential feeling» of our architecture (an aspect that some people have wished to see as a «Messianic» destiny guided by «esoteric» values). It must be noted that Portugal is almost a «landless» country, so that the necessity to find a national identity through departure «overseas» was a phenomenon that soon made its mark on its cultural evolution.

We will end by quoting a speculative intuition of Fernando Pessoa: «The value of a country lies in the degree of civilization with which, by making them national, gives a deep and new sense to the general elements common to all the countries of the civilization to which it belongs.»

«Portuguese Architecture and Urbanization seem to have looked for this NEW SENSE — especially in their most expressive phase between the 15th and 18th centuries — in a «simple vision of forms» that led to a «lightness» and their application in a «diffusing capacity» that is without equal in other cultures.

3.

PORTUGUESE ARCHITECTURE — CHRONOLOGY

From the Beginning to the End of the Middle Ages

From Pre-History to the Late Middle Ages

The first question that may be asked in dealing with the chronology of Portuguese architecture concerns the appearance of the subject being studied. From when can one speak about the existence of buildings of architectonic dimension or value within the present boundaries of the country?

In the opinion of Jorge Alarcão, it seems to be «a mistake to speak of architecture in relation to dolmens, *tholoi* or menhirs». Even in the Stone Age Celtic art, with its «pedras formosas» (beautiful stones), it is difficult to find an artistic feeling of the conception of inhabitable space and constructed forms.

Without going deeply into the question — as we understand the process of the appearance of architecture to be a very slow «invention» of humanised space which was gradually forged and perfected — the extremely important role of religion (the «figuration of the divine» as the creator of the first architectonic works must be stressed. In fact, almost all the material vestiges that still exist from this period, up to the romanization, are to do with funerary art, the cult of the sacred, tumular constructions.

It is essential that an analysis be made of these prehistoric constructions, about which we have very few precise details as documentary evidence is scarce, difficult to date and almost unknown, which often makes it hard to place them chronologically.

A remarkable evolution took place from the time of the cave wall paintings of Escoural (near Montemor-o-Novo in the Alentejo),

dated between 13 000 and 25 000 BC, in the Late Palaeolithic age, through the Mesolithic wall paintings in Muge and the Sado Valley (8000-3000 BC) to the Neolithic period with its first farmers and «polished stones» and earthenware objects (up to 3000 BC).

The Megalithic Culture (4000-2000 BC), «The first prehistoric culture in Portuguese territory that possessed original characteristics» (J. A. Ferreira de Almeida), would start developing at the end of the Neolithic period and continue up to the Copper and Bronze Ages. Spreading throughout the Upper Alentejo, these Megalithic men built impressive collective tombs, called «antas» or «dolmens», and funerary chambers composed of perpendicular slabs of stone (the props) with horizontal slabs laid across them, the whole being covered with earth or stones.

This «megalithic architecture», the earliest examples of which date from the fourth millenia BC (of the «first cultures of the southwest» of the Peninsula, 3750 to 2500 BC), can be found all over Portugal (in Monchique in the Algarve, Barbacena at Elvas, Vila Nova de Paiva in the Beira), but the most outstanding examples are in the Alentejo (the anta of Folha da Amendoeira in Odivelas, Beja, and the one of Olival da Pega in Reguengos).

Coexisting with these megalithic constructions are the tombs cut out of the rock (the so-called «artificial caves») that belong to the powerful «Tagus Valley Culture», which had an initial phase from 3500 to 3000 BC and a period of consolidation from 3000 to 2500 BC.

Existent examples of this culture are the caves of Carenque and Tojal de Vila Chã in Amadora (which has a corridor and a skylight), where craftsmanship and natural materials are mixed — as they are at Monte Abraão in Queluz-Sintra and Quinta do Anjo in Palmela.

Another artefact of the same period, the *tholos* (a false-roofed funerary construction consisting of a chamber and corridor covered with earth and stones) appeared at the same time. Examples are to be found at São Martinho in Sintra, Tituária in Mafra and at Tassos at Ourique, this last-named being of the period from 2750 to 2000 BC.

Between 2500 and 1500 BC, the final Calcolithic (or Eneolithic) period, when the first fortified settlements and iron-smelting appear, another culture was to make its mark on the Iberian Peninsula. This was the «Campaniform Vase» culture, which took its name from the shape of the ceramic pieces that it produced. This culture appeared in about 2250 BC and reached its zenith between 2000 and 1700 BC.

The corridor sepulchres that are to be found in the Tagus Estuary (Montes Claros in Lisbon, Alapraia at Cascais, Montelavar at Sintra) are of the same time.

With the Bronze Age (1800-800 BC) and the subsequent improvements in iron smelting techniques, there appear the first individual tombs, such as the one at Atalaia at Ourique, and the «monuments» (Roca do Casal do Meio, a large sepulchre at Calhariz, Sesimbra, probably built between the 10th and 11th centuries BC. The Argalic Culture (1700-1000 BC), which came from southern Spain, and the influence of the Tartessos in the late period of this age (1000-700 BC) must be stressed.

The Iron Age, from the 8th to the 1st centuries BC, brings the first and interesting differentiation in the dwellings of the north and the south of the country. The development of the so-called «Castrum Culture», related to the coming of the Hallstatt culture of central Europe with the migration of the Celts to the Iberian Peninsula, in the north of the country contrasts to the settlement of the Phoenicians and Greeks on the Atlantic coastline and the migration of the Turdulos to the south of the country, all of these bringing their Mediterranean traditions, between the 5th and 3rd centuries BC. Ossonoba, the present-day Faro, capital of the Algarve, was founded in this period.

The Celtic *castra*, proto-urban settlements of round houses, contain a certain decorative sophistication in the form of bas-reliefs on «pedras formosas» and bathhouses, although the buildings were very elementary and probably covered with thatch (Sabroso, Briteiros).

The first urbanization appeared with the Roman occupation, as did the first complex architecture, which was a result of systematic colonization.

A peripheric area of the Peninsula and the Empire, the part of Lusitania which is today Portuguese territory (excluding the capital Mérida, which was later incorporated into Spain) would, even so, be doted with some remarkable constructions and amenities, some of which still exist today. Some of the most outstanding examples are: a theatre in Lisbon, which was rebuilt in 57 AD: a monumental spa built into the side of a hill at Conimbriga from the time of Trajan: a dam and an aqueduct between Belas and Amadora, the former being a construction of the 3rd century AD; temples like those of the «forum» of Évora (end of the 1st century AD), Miróbriga, near Santiago de Cacém, Faro, in the «forum» in the Cathedral square, and Santana do Campo, Vidigueira, over which a church has been built;

cryptoportics like the ones beneath the «forums» of Aeminium (Coimbra) and Mértola, which seem to be platforms cut into a hill, a style that seems to have been developed especially in Lusitania; and public spaces, like the superimposed «forums» of Augustus and Flavius at Conimbriga and the amphitheatres at Conimbriga and Bobadela, Oliveira do Hospital, the latter being the only one that has been excavated. Besides this, there are riverside settlements and fish salting industries at Tróia, the Praça do Bocage in Setúbal and the Lisbon Ribeira (riverside area), today to be found in the 16th century House of the Pointed Stones.

Other less important spas in Lusitania and Gallaecia, to the north, such as those of Mirobriga, São Pedro do Sul, Freixo (Marco de Canaveses), in the «Colina dos Maximinos» in Braga and near the Augustine walls of Conimbriga, all from the 1st to the 3rd centuries, are worth of mention. A series of 1st century galleries known as spas that are to be found below the Pombaline Downtown of Lisbon seem to be more a cryptoportic or cistern than a spa.

There are also public baths in Tróia and near the «forum» in Mértola and fortifications like the «castellum», the tower and the 4th century outer walls of Mértola, walls and gates at Évora, Beja and Conimbriga. There are also innumerable almost unknown «forums» at Sellium-Tomar, next to the Church of S. Maria do Olival, and at Beja and the foundation of the keep at Idanha-a-Velha, which was the «podium» of the main temple in the «forum». Like the medieval squares, the «forum» seems to have been a usual part of the Roman urban system. This system seems to have tried to synthesize the local type of fortification and in some cases abandoned the usual flat areas to build their settlements, as can be seen at Conimbriga.

Other important vestiges are houses, both rural, like the «villas», and urban, like the refined 3rd century «Cantaber house» and «house of fountains» at Conimbriga, the humble two-storey construction of the 1st century found under the Mértola Town Hall, the residencial area of Tróia and the «house of the well» in Braga.

There are remarkable vestiges of rural «villas» in Portugal, outstanding the opulent 4th century construction at Milreu, near Faro, which has a temple that was transformed into a church by having an apse added. The «villas» of São Cucufate (Vidigueira) and Marim (Olhão) are of the same time and style.

Christianization, in fact, left frequent typological marks on these buildings, maybe because of the need for initial discretion in isolated

or rural areas. These marks can be seen in a temple that was adapted as a basilica of a «villa» at São Miguel de Odrinhas (Sintra), vestiges of a *basílica* at Tomar and of a palaeo-Christian chapel at Tróia.

A final reference must be made to Roman buildings of uncertain use, such as the «temple» (or mausoleum?) of Almofala (Figueira de Castelo Rodrigo), the enigmatic tower of «Centum Celas» (Belmonte) and the sanctuary of Panóias (Vila Real), which was thought to have been dedicated to the divinity Serapis.

In the six centuries of the so-called Early Middle Ages (from the 5th to the 6th centuries), one may refer to Late Roman or palaeo-Christian art (5th to 6th centuries), Visigothic art (7th-8th centuries) and the art of the Muslims, Asturians and Mozarabs (8th to the 11th centuries). It is a confusing period with very few material vestiges.

The present-day Portuguese territory would once more be divided by the Suevian occupation of the north between 411 and 585 (which was especially stable to the north of the river Vouga) and a continuation of Christian and late Roman culture in the south. The Visigoths reunited the area from the 6th century until the Arab invasion in the 8th century.

In the initial phase of this period, there was a continuation of the Christian cult in Portuguese territory in the outskirts of decadent urban centres which can be seen in the vestiges of the palaeo-Christian basilica (5th-7th centuries?) near the old primary school of Mértola, outside the old town. The Visigothic presence in the south, linked to the Kingdom of Toledo, can be seen in several elements of the 5th to the 7th centuries, such as capitals, also in the area of Mértola. Although they have already been mentioned, the palaeo-Christian basilicas of Odrinhas, Dume and Tróia, thought to be of 6th century, can be included in this phase of chronological uncertainty.

The remarkable 6th century «basilica of opposite apses» built alongside the «villa» at Torre de Palma, Monforte, with its vast hall and cross-shaped baptismal font, is of the same style as others at Málaga and Mérida in Spain. The «Visigothic cathedral» of the former and decadent Egítania of the Romans (Idanha-a-Velha) is also remarkable. The walls of this village contain a gate that is flanked by circular towers, which was quite usual up to the 11th century.

Virgílio Correia speaks about a «Visigothic group» of artistic works (7th-8th centuries), influenced by the Hispano-Roman architecture with a mixture of Byzantine elements «worked» with Germanic taste. The small church-mausoleums that he attributed

to this time, however, have been more recently dated by C. A. Ferreira de Almeida as frankly Mozarab (9th or 10th century), which shows just how uncertain the information about this time is.

Small interlinked cellular spaces measuring something like 10 m×13 m, these small, carefully built temples follow a symbolic, cruciform shape of sacred space that can be almost compared to the excavated cellular tombs of the Bronze Age owing to their composition and shape. Often drastically altered, the following temples can, despite everything, be considered as a group more through their typological affinities than through chronological certainty:

— The one of Vera Cruz de Marmelar, in the surroundings of Portel, with shell-like decoration on the arch of the window. Windows like this and with designs of animals show an eastern Christian influence via Byzantium, as could be seen from the decorated stonework of the disappeared Convent of São Félix at Chelas, Lisbon;

— The one of São Miguel da Mota (Alandroal), already demolished, studied by Virgílio Correia;

— The Church of São Gião in Nazaré, originally a part of a monastery, which is generally thought to be of the 7th century but which C. A. Ferreira de Almeida considers to be of the 10th owing to its «closed» construction, which is the opposite of the «open» Visigothic style.

— São Frutuoso de Montelius in Braga, generally thought to have been built before 656-665 but attributed to the 9th-10th century by C. A. F. Almeida. It is the «most Byzantine building in the Peninsula». Of a cruciform plan, it is not known, despite prolonged restoration work, whether it was a mausoleum attached to a church or a separate edifice. Having a plan with three horseshoe-shaped arms, all of which are supported by horseshoe arches, it is usually compared to the Gala Placidia mausoleum in Ravenna;

— São Pedro de Balsemão in the surroundings of Lamego, clearly 10th century Mozarab.

All these constructions possess a refinement and an attention to detail, expressed in intimate and welcoming proportions. Besides this, they are an almost unique witness of a period that remains obscure in many other architectonic fields.

Virgílio Correia divides the artistic expression of Portuguese territory between the 8th and 11th centuries into a «subjugated Mozarab or Christian group», of predominantly Visigothic influence and Muslim in secondary elements, and a «Asturian or independent Christian

group», which we may call «of the reconquest» and which is characterised by artistic poverty and a decline of Visigothic models.

If São Pedro de Balsemão is representative of the first group, the Chapel of Senhora da Rocha near Armação de Pera, a sanctuary with an hexagonal interior, which is of a later date, depicts a relationship with Mozarab «images» and a Mediterranean sensibility.

There are isolated vestiges of this period, such as the decorated stonework that was used in the Church of St. Torquato in Guimarães, which depicts alternate friezes of «swastikas» and «six-petalled rosettes» and the usual shells over the arch, and the recently discovered portal of the Convent of Costa, also in Guimarães and thought to be of the 10th century. But the building that is most certainly dated and is architecturally representative is the church of Lourosa da Serra in Oliveira do Hospital, built in 912. Although it has been much altered, having three naves separated by horseshoe arches, it is an indelible mark of the Visigothic tradition in Mozarab architecture.

Although little is known about the architectonic materials left by the Muslims in our country, there is no doubt that the inheritance was poor. Military vestiges are uncertain — the «Moorish Wall» in Lisbon may have been built on earlier foundations. The castles of Santa Maria da Feira and Silves can be mentioned, the walls of the latter being the most important of the Arab domination, with a tower dating from 1227 and a curious «wellcistern» of the 12th century near the wall at the Almadina Gate. There are also vestiges in the castles of Pombal, Soure, Montemor-o-Velho, as well as the old «Treason Gate» in Coimbra, which has disappeared, and the main gate of the 12th century Almoada Wall in Elvas. And in Mértola, near the old and above mentioned «forum-alcazar» which was built over the cryptoportic and which was used as a cistern in Islamic times, is the most interesting monument of the time — a mosque that was transformed into a church at the time of King Manuel I and still has the «mirhab» encrusted in the wall. It had probably been reconstructed at the end of the 12th century.

Romanesque: Geography, Typology, Materials

It is possible to speak about the formation of Romanesque architecture in Portugal from the last quarter of the 11th century. Throughout

the next two centuries, it became very strongly implanted in the north of the country, especially in the Entre Douro and Minho provinces. Most of the construction was religious, both monastic and parochial, which accompanied and recreated a strongly rooted dispersed settlement during the slow process of the Christian Reconquest.

On the other hand, this architecture is much less significant in the centre and the interior of the country, in the Beiras and Trás-os-Montes, while in the south there are only four churches that contain Romanesque elements: Santa Maria do Castelo in Torres Vedras, the Cathedrals of Lisbon and Évora and the now ruined Santa Catarina in Monsaraz. One must not forget, however, the dynamic and crucial role played by the centres that diffused this style. If the northern centres of Tuy, Braga or Oporto can be cited, so can Coimbra, where one of the most notable temples in this style is to be found, which is perhaps one more example of the cultural contrast between the Mozarab values of the centre and south of the country and the northern values that are a result of the invasions of the Christianised Barbarians.

After reaching its zenith in the 12th and 13th centuries, Romanesque went through a phase of «resistance» (C. A. F. de Almeida) in the 14th century in the north, while Gothic was developing in the south.

The French influence was decisive in religious architecture from the beginning, probably due to the crusades and certainly due to the religious orders that were entering the country, especially the orders of Cister and Cluny.

The monasteries played a crucial role in the settling of the areas that had become more or less deserted by prolonged warfare. Frequently isolated, like the one of Vilarinho, Santo Tirso, constructed in the heart of pasture lands and later in the most fertile agricultural areas, it was mainly the Benedictines and the Cistercians who started the movement. Their churches, would later become the parish churches of new settlements, which shows the influence of the monastic institutions in the occupation and the organization of the country. The 12th century Benedictine monastery of Ermelo (Arcos de Valdevez, near the Soajo Range) and the Cistercian monastery of the same century at São João de Tarouca are examples of the constructions of these two orders.

The location of the monasteries also often obeyed the hermitic traditions of the «sacred sites» in places of panoramic beauty, as was

the case of São Pedro das Águias at Tabuaço and Pitões das Júnias at Montalegre. The setting up of monasteries near castles was also common practice (S. Miguel do Castelo, Guimarães).

According to C. A. Ferreira de Almeida, the following areas of the country, from north to south, with differing features, can be considered as «Romanesque areas»:

— An «Upper Minho Romanesque», influenced by Tuy, in Galicia, the most outstanding constructions being the Benedictine churches of Ganfei and Sanfins de Friestas (both in the area of Valença), built in the 12th and beginning of the 13th centuries, and the parish church of Paderne and the Chapel of Nossa Senhora da Orada, both in the area of Melgaço and both mid-13th century;

— The area of «Ribeira Lima» (the banks of the River Lima), with the church of the Benedictine monastery of St. Cláudio da Nogueira, built from the 12th to the 13th centuries, the 13th century church of Bravães (Ponte da Barca) and the Chapel of São João Batista da Comenda de Távora (Arcos de Valdevez) built in the late Romanesque and a local taste;

— The «Bacia do Cávado» (the Cávado Basin), with the Church of Abade de Neiva (Barcelos), the 13th century parish church of the Collegiate of Barcelos, the Benedictine church of Vilar de Frades (Barcelos) from the beginning of the 13th century and the church of Manhente (Barcelos), built in 1117;

— The area of the River Ave, with the parish church of São Pedro de Rates (Póvoa de Varzim), a remarkable work of the second half of the 12th century that introduced Gothic into the area, and Braga Cathedral, constructed between 1185 and 1210;

— The area of Guimarães, where the churches of São Miguel do Castelo (1239) and Santa Cristina de Serzedelo (mid-13th century-beginning of 14th century) are outstanding);

— The zone of «Ribavizela» (the banks of the River Vizela), with the Benedictine monastery of Santa Maria do Pombeiro (13th-14th centuries) and the remarkable church of the monastery of Roriz (Santo Tirso), built in 1228;

— The area of Oporto, where the most important works are the much altered Cathedral of the city, the monastery of Águas Santas (Maia) and the famous church of Leça do Bailio (Matosinhos) of the beginning of the 14th century, the period of transition to Gothic;

— The «Bacia (Basin) of the River Sousa», with the church of Paço de Sousa, which was built throughout the 13th century and

inspired in the works of the Lower Tâmega area and Roriz, the monastery of Cete (Paredes) from the beginning of the 14th century and the mid-13th century, church of São Pedro de Ferreira (Paços de Ferreira), with the remains of the facade of the «cemetery church»;

— The Lower Tâmega, with the 14th century São Miguel da Ega (Entre-os-Rios, Penafiel) and the church of Boelhe (Penafiel) from the end of the 13th century;

— In the areas of Amarante and Bastos are the important and original monastery of São Salvador de Travanca (Amarante), with its 13th-14th century tower, and the 13th century church of Veade in Celorico de Basto.

There is a much lower density of Romanesque buildings outside the above mentioned areas. There is an area in Trás-os-Montes where one can find the parish church of Chaves with a portal and a tower and the church of Algozinho in Mogadouro, both works of the 13th century, besides the original, but incomplete, 13th century chancel of the monastery of Castro de Avelãs in the surroundings of Bragança, which can be considered as a «foreign» work in the Romanesque-Mudejar tradition of the Douro and Castilian meseta. The church of Ermida in Castro Daire, the much altered church of Barrô overlooking the River Douro and the Burgundian Cistercian monastery of Tarouca, built between 1154 and 1169, are to be found in the area of Lamego. In the Beiras are the church of Nossa Senhora da Fresta in Trancoso, from the end of the 13th century and with a Lamego influence, and the «old church» of Moreira do Rei.

Coimbra, the political capital of the time, was automatically the «pioneer» of Romanesque in Portugal and can boast some very old works, such as the remains of the cloister of São João de Almedina of the end of the 11th beginning of the 12th centuries, the vestiges of the church of Santa Cruz (1132-1228), which was possibly influenced by Cluny, and the «Old Cathedral», one of the country's most notable Romanesque urban monuments. It was built between 1162 and 1180 and the facade, chancel, transept and crossing (with a lantern tower of the 18th century) still survive. It was built under the orders of Master Robert, who also worked on the Cathedral of Lisbon. The circular chapel in Tomar, perhaps started in 1195, and Lisbon Cathedral are the only Romanesque constructions that can be found farther south.

A typological analysis of Portuguese Romanesque reveals features that are «a sign of simplicity and its limitations» (C. A. Ferreira

de Almeida). The churches are almost always in the basilica style, with a nave, chancel and transept. Only rarely does the chancel contain five chapels, like the ones in Braga Cathedral and Salzedas Abbey, some have three chapels, circular in the cases of the «Old Cathedral» of Coimbra, Rates (Póvoa de Varzim) and Castro de Avelãs (Bragança), and square in the case of the Cistercian monasteries of Ermelo and Tarouca. But the most common style is the church with just one square apse, the oldest one being in Rio Mau, built in 1151.

The transept are the arms of a cross in the cathedrals of Braga, Oporto and Lisbon and in the monasteries of Salzedas and Tarouca. All these cathedrals have three naves. Oporto and Lisbon cathedrals have roofs of stone, as has that of Évora, while Braga cathedral is roofed in wood. Almost all the small rural churches, which are the «soul» of Portuguese Romanesque, have just one nave and a wooden roof. The exception is the 13th century church of Cedofeita which has a stone vaulting supported by circular pillars, similar to the circular chapel of the Templars in Tomar, which was possibly built in the 12th century.

The cathedrals usually have two towers flanking the facade. In São Martinho dos Mouros (Resende), however, the tower surmounts the portal. Although it disappeared with the earthquake of 1755, the remarkable lantern tower of Lisbon (Cathedral must be mentioned, as must the separate towers of Travanca (Amarante) and Abade de Neiva (Barcelos). The most common style, however, is the simple belfry, a type of wall-tower above the facade.

Some churches have porches, like the one at Serzedelo, Guimarães, while others have vestiges of porches, like the church of Ferreira, Paços de Ferreira. A characteristic feature is the portal that stands on a solid square stone foundation that juts out from the facade, which could have been a way of continuing with the old-style porch. One of the most «decorative» examples of this style is in the church of the monastery of Bravães (Ponte da Barca). The top of the portal finishing in a triangle would evolve into the Gothic, as in the church of Alporão in Santarém. Concentrated in remarkable architectural elements, the decoration sometimes resorted to themes that were thought to be Celtic. In the parish church of Barcelos, for instance, the archivolt of the main portal are decorated with fleur-de-lys, swastikas, rosettes and friezes of lozenges. The typical openings of the Romanesque tended to be rose windows, as in Ermelo, another proto-Gothic «desire».

The material used was the granites that abounds in the north, plus the soft limestone of Coimbra and the «loiz» stone in Lisbon. There was only one case in which brick was used, the chancel at Castro de Avelãs, which gives it a Castilian style, and one in which cob was used, at Castelo de Paderne, Albufeira. The building is constructed on solid foundations and has thick, buttressed walls. Little use was made of freestanding columns, as robust pillars and columns attached to the walls were preferred. Most arches were round, although ogival and horseshoe arches can be found.

Military architecture was somewhat backward at this time, being limited to simple castles of an outer wall, like the one of Boivão, Valença. The role of the military orders would be crucial in this field, especially with the Templars in Tomar and at Almourol, the latter castle being built in 1171. It was then that «active defence» appeared, with towers being built along the walls and a separate keep tower standing in the middle of the castle, like the one in Guimarães. There are Romanesque vestiges in the castles of Vila da Feira (11th-12th centuries), Montemor-o-Velho, Soure and Pombal, as well as in the ones of Alcobaça (1209), Sortelha and Sabugal, the last two being erected by King Sancho II in 1228.

Little-known civil architecture includes 12th century bridges at Canaveses, Amarante and Águeda and cisterns in the castles of Lamego and Bragança, the latter being known as the «Domus Municipalis». It is a work of the 13th-14th centuries and is a large building with its roof supported on elegant arcades.

Gothic: Evolution; the Rise of Civil Architecture

Geographically, the implantation of Gothic architecture in Portugal is almost the opposite of that of Romanesque. Ironically, a central European style with a certain «Nordic» feeling found a wider acceptance in the south of the country.

Nearly all the religious constructions were erected south of Leiria, in the provinces of Estremadura, Alentejo and Algarve and very few are to be found in the centre and north of the country.

Emphasis must be laid here on the role of the military and mediant orders, mainly in the south, where there was an overwhelming

need to resettle or consolidate the territory reconquered from the Muslims.

Different from Romanesque (Pedro Dias) even in its origins, being «freer and more Norman», the style was adapted to innumerable buildings that had been started in the previous period in Portugal so that they would have a link with the «new Gothic order», which, as it happened, learned to coexist with Romanesque throughout the 13th century. But it cannot be said that there was an «evolution» from one style to another.

There is a special understanding of Gothic in Portugal, which can be defined by its becoming enmeshed with the local Islamic tastes, by the lack of any Romanesque tradition in the south, which facilitated its acceptance, by its late arrival in the country, by the humility of the buildings erected, almost without the need to resort to flying buttresses, and also by the lack of any large-scale construction in the cities and by the few large religious houses that existed.

The first important building erected in the new style was the Cistercian Abbey of Alcobaça, built under the influence of the architectural model of Clairveux in Burgundy between 1195 and 1252. The work was carried out in various phases and with successive interruptions. It exerted very little influence on the country at the time. Owing to its enormous size, it remained apart from the rest of the buildings erected.

Another «foreign» work, certainly executed by artists from abroad, like Alcobaça, was the cloister of the «Old Cathedral» of Coimbra, which was started in 1218. The church of Santa Maria de Aguiar at Figueira de Castelo Rodrigo, built in 1200, also shows signs of «Cistercian architecture».

The reign of King Afonso III saw a renovation in the arts which corresponded to a phase between the coarseness of this reign and the «European» refinement of the following reign of King Dinis.

The following churches can be cited as being the forerunners of the new style at this time: São João de Alporão in Santarém, the roof and luminosity of which are almost Gothic; the mid-13th century Santa Maria do Olival in Tomar, which belonged to the Templars and shows distinct Cistercian influence; the Cathedral of Évora (1267-1325), which can also be included in the early Gothic in Portugal, with its lantern tower of squinches and octagonal base. For this

phase, and in relation to the nucleus of Santarém, Pedro Dias mentions dates (beginning of the 14th century) that are later than those suggested by Mário Chicó.

This important «nucleus» of Santarém includes the Convent of St. Francisco (1242-1315), with a 14th-15th century cloister and a portal surmounted by a pediment, like the above mentioned church of Olival, the church of the Santa Cruz, dating from 1280, and the large church of the Convent of Santa Clara, built after 1259. Three naves separated by arcades supported on slender pillars, a wooden roof, transepts forming a cross and a vaulted chancel with parallel chapels are common features of all three churches. The expressive simplicity, together with a certain architectural poverty, shows the inherent austerity of the mendicant orders. The churches of S. Francisco (Estremoz, 1255) and S. Domingos (Elvas, 1276) are also a part of the transition to the reign of King Dinis.

From the reign of King Dinis the Convent of Odivelas (1295-1305) and the cloister of the Abbey of Alcobaça (1308-1311) maintain the initial Gothic forms. The cloister was built under the orders of the architect Domingos Domingues, who built Santa Clara-a-Velha (1316-1331) in Coimbra, where he introduced the vaulted roof, three naves without a transept and illumination by means of three rose windows, which seems to be the influence of the ribbed vaulting of Alcobaça, although much simplified. The church of the Convent of Santa Clara (Vila do Conde, 1318-54) is of the same lines, although it follows the northern tradition more closely, having a wooden roof, one nave and rose windows.

Summing up this phase, Mário T. Chicó speaks about «a national monastic architecture characterised by its simplicity and relative elegance, as well as by its undoubted conservatism».

From the same time are the church of the Knights of Malta (Leça do Bailio, 1306-1326), with a «military-looking» tower, and the Monastery of Cete (1323), works that C. A. Ferreira de Almeida considers to be Romanesque but which Pedro Dias classifies as Gothic. They were possibly inspired in the earlier church of São Pedro (Paços de Ferreira), which had a single rectangular nave, large chancel, ogival arches and was greater in height. The Cathedral of Viseu (beginning of 14th century), the church of Atougua (end of the 13th century) and the temple of Nossa Senhora dos Mártires (1333) of the Order of St. James are of the same phase. Special reference must be made to the «fortress-churches» of the Alentejo, Flor da Rosa (1356),

linked to the Hospitallers, and Boa Nova de Terena at Alandroal, which belonged to the Order of Avis and was built at the time of King Afonso IV, owing to their originality and the fact that they were the forerunners of the type of Franciscan «stronghold» that will be found at Chaúl, in India in the 16th century.

Mention must also be made of the cloister of Évora Cathedral (up to 1340), which expresses the perpendicular style and has more complex arcades, Silves Cathedral (the work done before 1313) and the cloister of Lisbon Cathedral, which was under construction in 1332, at the time of King Afonso IV. The apse of this last-named cathedral would be the most highly developed Gothic structure up to the building of Batalha Monastery, which was constructed between 1337 and 1359.

A new phase opened with the building of the Monastery of Batalha, erected to commemorate the victory over the Castilians in the Battle of Aljubarrota and constructed between 1388 and the 16th century. Original and notable, it was inspired in the structural model of the Lisbon Cathedral, the first architect being Afonso Domingues. The church has three naves of differing heights, which followed the traditional pattern of the country's religious architecture, and a vaulting of stone. It was later influenced by the European flamboyant. Huguet was responsible for the vaulting of the Chapter House and the Founder's Chapel, as well as for the Unfinished Chapels (on the orders of King Duarte), the decoration of the facade and the rose window with its magnificent, esoteric six-armed swastika, which would later reappear in Tomar in the cable moulding above the famous window.

As it was the most important building that had ever been constructed in the country, it is important to stress its place within the traditional trends of Portuguese architecture, which would be redefined at this time: «Seen from a distance, on the tranquil plain on which it stands, the church gives us an impression of horizontality in its general appearance, in contrast to the perpendicular style of northern European architecture...» (João Barreira, quoted by Mário T. Chicó.)

The following churches were also built while Batalha was under construction: Nossa Senhora da Oliveira of the Collegiate of Guimarães (from 1387 to the first quarter of the 15th century), built by the architect João Garcia of Toledo and with three naves, transept and a wooden roof: Santa Maria do Carmo in Lisbon, a «reduced model»

of Batalha erected by the architect Gomes Martins on the orders of D. Nuno Álvares Pereira at the end of the 14th century (it was badly damaged by the 1755 earthquake). In the north, the church of São Domingos en Vila Real (1424-1451) has three naves and a wooden roof, the church of São Domingos in Guimarães has a remarkable old-fashioned cloister (begun in 1397) with a running arcade and two parallel pillars (like São Bento in Santo Tirso) and the church of São Francisco in Oporto follows traditional solutions with a simple wooden roof.

The most direct influence of Batalha can be seen in the Cathedral of Guarda, which has a chancel that was finished in 1426 and a transept that was completed at the time of King Manuel I. As Mário T. Chicó says, due to the influence of the mendicant orders and the activity of the monasteries throughout the Gothic period Guarda Cathedral proves that in Portugal, contrary to what happened in the rest of Europe, «it was the cathedrals that tried to adapt their plans and structures to those of the churches of the abbeys».

The chancel of the church of Nossa Senhora da Pena in Leiria castle also suggests a lightness of expression inspired in Batalha and the magnificent church of Nossa Senhora da Graça in Santarém, a mid-15th century Augustinian convent of traditional size and structure, has an elegant rose window and a decorated portal. The parish church of Lourinhã (1384-1397) is the simplest example of the same style and the church of Santa Maria do Castelo in Loulé, the parish churches of Tavira (beginning of the 15th century) and Silves (1443-1499) and the church of the Convent of São Francisco, also in Tavira, are similar.

Rooted in their link to regional forms, it can be concluded that, due to their overall expression, «the perfection of the structure of the churches in the south does not cause an enlarging of the windows» (Mário T. Chicó).

Three trends of religious architecture can be mentioned in the second half of the complex 15th century in Portugal. The first is an old-fashioned style, which is found in the Collegiate of Barcelos (1464) and the parish churches of Monção and Ponte de Lima. The second is a continued trend of exuberance, decoration and refinement, found in Prince Henry's «cemetery cloister» in the Monastery of Christ in Tomar and following the style of Batalha. The third is a trend of simplification, seen in the crypt of the Count of Ourém in the old Collegiate (1450-1487), in the Synagogue of Tomar, which,

like the above mentioned crypt, has a groined vault, the proto-Manueline parish church of Soure (1470) and the church of Santiago in Palmela, which, according to Pedro Dias, is in «plain, linear, Gothic». Through the works connected to the Jewish community the intervention of the military orders and the special work of Ourém, it can be said that the last of these trends was transfixed by a «cult» feeling of architecture that was linked to «the initiators».

The so-called «Late Gothic» of the Alentejo had an influence in transforming the Gothic models, which, after being accepted, were then elaborated into an overall simplification and standardization that was later used as the prototype in the Renaissance period and, mainly, during the period of overseas expansion. This simplification led, above all, to more compact constructions and a search for unidimensional space, as José Custódio Vieira da Silva noted: «this simplicity and taste for the geometric, which we had seen in the church of Santiago in Palmela and the single nave of the church of Conceição in Beja takes on a permanent character in the temple of Lóios in Évora, being a defining element both in the Alentejo Late Gothic and of a Mudéjar sensibility.

The role of Évora, in fact, is crucial in this process, in works like the church of São João Evangelista dos Lóios (1485-1491), the Hermitage of São Brás, with its volumetric originality, cylindrical buttresses and an «innovative» galilee-porch (1483-1490), and, above all, the church of São Francisco, which, with its enormous single nave and galilee, is of prime importance in order to understand 16th century Jesuit architecture and which was rebuilt between 1476 and the 16th century. It was something new and would influence the local 16th century architecture, as can be seen in São Bento de Castris, the Monastery of Espinheiro and the church of Lóios in Arraiolos.

Some «key buildings were also erected in Beja at this time, such as the church of the Convent of Nossa Senhora da Conceição (1459-1473), a type of «mini» São Francisco. In the Algarve, the church of Santa Maria of Faro must be pointed out. This church has a central tower, which was possibly, the prototype for the 16th century churches that had a tower surmounting the portal, like the ones of the Priory of Rosário in Old Goa and the Cathedral of Baçaim, also in India.

Both military and civil Gothic architecture deserve attention. Innumerable military constructions were erected during the period of instability and conflict between the reigns of Kings Dinis and Fernando I, such as the castle and walls of Trancoso (Upper Beira),

the pentagonal tower at Sabugal, new walls around Lisbon and Oporto (14th century), the castle at Alter do Chão in the Alentejo and the keep at Estremoz at the end of the 14th century.

Innovative circular towers appear in the 15th century, such as the ones in the castles of Bragança and Beja. The construction of small castles, like the one of Penedono, and the reconstruction of others, like the one of Vila da Feira, in the same period also deserve attention.

Fortified residences are also a feature of the time, like the Episcopal Palace of Braga (1378) and the Royal Palace of King Dinis in Estremoz, with a surviving 14th century galilee. The 15th century crenellated «palace-castles» must be mentioned, such as the Palace of Ourém and the castle of Porto de Mós, both built on the orders of D. Afonso, Count of Ourém, the palace in the Castle of Leiria, which has an elegant verandah that is related to Batalha, and the palace of the Dukes of Bragança in Barcelos. The first palace to really be used as a residence was built by the Dukes of Bragança in Guimarães in the second half of the 15th century. It was possibly of French inspiration and has undergone a lot of reconstruction work this century. The Royal Palace of Sintra must not be forgotten.

The «manor-like towers», an expression coined by Carlos de Azevedo, like the one of Gomariz (14th century) also appear at this time but they soon gave way to more complex manor houses — the ones with an adjoining residential tower (Palace of Gíela, 15th-16th century), some with two towers and a central body (Manor House of Pinheiros in Barcelos (1448) and others with one central tower (examples of the 16th century). Reference must also be made to some urban residential quarters that have survived until our times, like the Jewish quarters at Castelo de Vide and Tomar, plus some streets in Évora and Guarda.

In the field of public amenities and infrastructures, mention must be made of covered fountains, like the 14th century one of Figueiras in Santarém and the Fountain of the Count at Ourém, built in 1435, and bridges, such as the one at Mucela over the River Alva and, above all, the one at Ucanha, in Salzedas, with a toll tower and built in the 15th century.

From 1500 to the End of the 18th Century

Being on the south-western extremity of Europe, Portugal began a process of overseas expansion — the Discoveries — from the 15th century that would take its architecture to different parts of the world, namely the Middle and Far East, India, Brazil and Africa, besides the Atlantic archipelagos and Oceania.

This process, carried out with the exchange of influences and miscegenation, went on until the 20th century and gave a seemingly regional artistic production (within the context of western Europe) a different and amplified universal dimension, which is a proof of its originality and value.

As we shall also see in regard to urbanisation, it is impossible to separate the architecture of this phase in Portugal to that developed overseas from Morocco to China and Oceania.

Portuguese architecture would take to these areas its traditional and conservative tendencies, its taste for simple and concret forms and reduced dimensions and even its stubborn fondness to follow its own course that was frequently in contrast with the rest of the artistic trends of Europe.

If we consider the period from 1490 to 1990, the five hundred years in which this art took root and became consolidated more coherently, we can map out the different cycles and languages of production, which alternate between phases of stability and autonomy and phases in which international and regenerating influences were absorbed. The former phases were the inimitable Manueline from 1490 to 1540, the pertinacious «Plain Styles» from 1580 to 1680, the vigorous Pombaline, especially between 1750 and 1780, and the inevitable Romanticism of the 19th century. The latter phases were the Renaissance-Mannerist that started around 1540, the Baroque from 1680, the Neo-Classic at the end of the 18th beginning of the 19th century, and even the innovative Modernism between 1890 and 1940.

From Manueline to Mannerism (1490-1580)

During more than three centuries of political independence, the small kingdom of Portugal saw the development of a sober, rural Romanesque architecture and the flourishing of a «clear and simple» Gothic, as we have seen.

The stylistic components that came from the art of the Europe beyond the Pyrenees, together with the typological and spatial tradition of Mozarab roots (Mozarab denotes the Christian-Muslim culture of medieval Iberia), would flourish at the end of the 15th and the beginning of the 16th centuries. This corresponded to the economic growth and social development of the time and gave rise to an original and unique architectural style, not only because of its own inherent features, but because of the universal diffusion it achieved over the following two hundred years.

The so-called Manueline style, named after King Manuel I (1495-1521), who reigned during the Discoveries and the golden period of the Indian and African spice trade, has been considered in its several dimensions by various authors and investigators (Robert Smith, Reynaldo dos Santos, Mário T. Chicó, Pais da Silva and others) as an individual manifestation of Flamboyant or Plateresque within the final European Gothic, as happened to, and through, several countries around Renaissance Italy, as a transition style, blending structures of Gothic roots with Renaissance elements, or even as a «Luso-Moorish» style, especially in the south of the country, a type of «Mudéjar» reviving the old Mozarab tradition, and also as an «Atlantic Baroque», redolent with naturalist forms of the Discoveries and enhancing the decorative elements.

Besides being all this, we also believe that in its essence Manueline was also an experimental and innovative style, intuitive and practical, looking for new rules and proportions for a nationally conceived rebirth in the «dismantling» of Gothic language in clear and elementary geometric forms such as cylinders, cones and pyramids. At the same time, it was a return to the world of «clear and luminous» forms — cubes and spheres — of the common southern and Mediterranean traditions, both Muslim and Italian.

A vigorous and «festive» style (in the words of Rafael Moreira and Paulo Pereira) of a new sea-borne empire, Manueline style was used in military, civil, religious and public amenity constructions in the building and enlarging of edifices and cities in all corners of the empire.

Among the naturalist elements like cable mouldings, algae and sails, and the complementary elements such as pinnacles, cones, bevelled battlements and cylinders attached to the walls, the clarity of the structures that supported the excessive, but light, decoration could be seen.

The new style would become defined between 1490 and 1505 in churches in the Estremadura and the island of Madeira (Funchal Cathedral, 1493-1502-1517) and in fortresses in North Africa. The most important works appeared by 1521: the Unfinished Chapels at Batalha, near Leiria, with a portal built by Mateus Fernandes in 1509; the Monastery of Jerónimos at Belém, Lisbon, with a church and cloister built by Boytac between 1502 and 1516 and vaulting and verandahs built by João de Castilho between 1516 and 1521, being one of the most original Hall Churches in southern Europe; the nave of the church at Tomar, built by Diogo Arruda in 1510-1511 and being in perfect harmony with the earlier styles around it; and the Tower of Belém, the fortified limestone «jewel» constructed by Francisco de Arruda between 1515 and 1520.

The style spread all over the country at this time, with the building of residential manor houses like those of Água de Peixes near Alvito and the Palace of Évora, both in the Alentejo, of castles like the ones of Évora Monte (1531) and Vila Viçosa (1537), also in the Alentejo, Safim in Morocco and Ormuz in Pérsia, of small chapels and churches, sometimes rebuilt or enlarged, like the parish church of Caminha, in the north of the country, and ones at Alvito, in the Alentejo, Silves, in the Algarve, and at São Tomé de Meliapor in Madras, India. The influence of this Portuguese style, although peripheral, has been recognised in Spain and the Canary Islands.

The style would persist until about 1540 with works overseas: the church of Ribeira Grande in Cape Verde (1522); the parish church of Ponta Delgada in the Azores (1533); the church of the Priorate of Rosário in Goa (1540 or 1543). It is also probable that the decoration in the Palace of Audiences in Lima, Peru (1530), and the portal of the church of Conception of Texcoco, México, were influenced by the Manueline style.

A new «foreign» current that introduced the Italian classic models was felt in the 20's and 30's of the 16th century. It took shape during the reign of King João III (1521-1557) and the following regency and reign of Queen Catarina and King Sebastião (up to 1578), in the midst of a policy of severe restraints on public spending, administrative and colonial crises, the spiritual tension of the Council of Trent and the Inquisition and an atmosphere of austerity and the counter-reformation.

Flourishing alongside the Manueline in places like Lisbon, Tomar, Coimbra and Évora, the first works in the new Italian style were small

buildings like the church of Conceição in Tomar (1530-1540), the Manga Cloister in Coimbra (1533), the church of Santo Amaro in Lisbon (1549) and the church of Valverde near Évora (1550-1560) or sculptural works applied to architecture such as the portals of the Old Cathedral and the church of Santa Cruz in Coimbra, where masters like Nicolau de Chanterene, Diogo de Castilho and João de Rouen distinguished themselves. These works generally expressed a certain experimental or transitory character.

The theoretic-architectonic work of the Portuguese that travelled in Europe has its most famous representative in the person of Francisco de Holanda (1517-1584), who had a scholarship to study in Italy, where he had contacts with Michaelangelo, and who was the author of the overall project for the engrandizement of the capital of Portugal («Of the Buildings That Are Lacking in the City of Lisbon») with grandiose public works that were «modern» and utopian. The best work of this period is Diogo de Torralva's King João III cloister in the Monastery of Christ in Tomar (1554-1562), which imposed Mannerism in the middle of the Manueline volume of the church and the first experiments with Renaissance that can be seen there.

From the middle of the century, and with the Mannerist forms already absorbed, the new style came into fashion and spread. New «cathedrals» (churches in the seats of Bishops) were built at Leiria, Portalegre (by Afonso Álvares), Miranda do Douro (by Miguel de Arruda) and in Goa in India. All of them were built according to a modernised version of the hall church (a typology which had been tested in an earlier phase), in a classic design, but still with traces of Gothic-Manueline lines. Started between 1552 and 1562, these temples would influence the creation of a true regional style», that of small Mannerist «columnar» churches (with free-standing columns in the interior of the nave), entirely constructed in stone and brick, mainly in the south of the country. This style would coexist with another humbler and older one, that of churches with wooden roofs in the provinces of Estremadura, Alentejo and Algarve.

Albrecht Haupt, Pais da Silva, Horta Correia, Chueca Goitia and others have studied this complex transition period and they stressed the following aspects: its formal originality, seen in concrete and unusual works like the church of Graça in Évora (1530-1560); the role that treatises (following the erudite Italian models, especially Serlio) played in creating easily typified and repeatable structures; the role played by architects with military training, such as Jerome of Rouen,

who worked on the chancel of the Monastery of Jerónimos in Lisbon in 1571, and Manuel Pires and Miguel Arruda, who worked on the church of Santo Antão in Évora between 1559 and 1563, who would be responsible for a utilitarian and austere conception of practical architecture, constructing the barrel vaults that would later be applied overseas, as in the Jesuit churches at Baçaim and Diu in India and the church of São Bento at São Salvador da Bahia in Brazil; the presence of two contrary models in religious architecture — the Jesuit, with the church of São Roque in Lisbon, which was built at the same time as that of Gesu in Rome (1565-1576) and which has a single nave and a facade with no towers, and the «Herreriano» type (named after Juan de Herrera, author of the Escorial), with the Church of São Vicente in Lisbon (1582-1590), built by Filipe Terzi and Baltazar Álvares with two towers and a galilee. Some authors also refer to the influence of the strapwork ornamentation of Flemish origin or inspiration and the conception of autonomy in the north of the country, which can be felt in the Church of Salvador in Grijó, built by Francisco Velasquez in 1547.

A final reference to this stylistic phase must be made in regard to the ever-increasing use of glazed tiles in the lining of interior walls of religious buildings, like the Convent of Graça and the Church of São Roque in Lisbon, and of palaces, such as the Royal Palace of Sintra and Bacalhoa Manor at Azeitão. The first tiles used were the Hispano-Moorish dry-cord or «aresta» type, first in chequer patterns and later painted with gradually simplified and popularised Renaissance themes which would assume great importance in the following phase owing to the way they enriched the spaces they occupied.

From the «Plain Style» to Baroque (1580-1780)

The propagation and diffusion of Portuguese architecture increased greatly in the country's Atlantic possessions, Africa, Brazil and, above all, in India and the Far East from the second half of the 16th century. Innumerable civic, residential, religious and military buildings were erected in cities, factories and fortifications.

Reference must be made to the participation of Italian masters in defence works and town planning. The first was Tommaso Benedetto

of Pesaro, who worked in Lisbon from 1559 to about 1576. After 1541 he had worked in Mazagan, Morocco, on the fortress where Miguel de Arruda and Diogo Torralva constructed their spectacular sistern. He was followed by Tiburzio Spanocchi, who worked on the fortifications of Monte Brazil at Angra in the Azores from 1590 and in Brazil after 1605, Vincenzo Casale, who carried out the initial work on the forte of Bugio in the Tagus estuary between 1590 and 1593, the work being completed by Giovanni Turriano around 1646, Battista Antonelli, with forts in Rio de Janeiro and the north-west of Brazil from 1582-1597 and, the most important of all, Giovanni Batista Cairato, the «royal architect of the Indies». He left Milan for the Orient, where he worked from 1583 until his death in 1596. He worked on the fort of Jesus in Mombassa in the present-day Kenya and carried out works in Damão, Chaúl and Baçaím in India, as well as probably working on the remarkable fortress of Diu.

Earlier works at Lagos in the Algarve (1553) and São Julião da Barra in the Tagus estuary (1553-1575) are due to Miguel de Arruda, «the master of fortification construction». The forts of Soar in the Persian Gulf (1560) and the Fort of the Magi in the estuary of the River Mandovi (1554-1556) in Goa were the work of Inofre de Carvalho. The work in Goa was continued by António Rodrigues, «master of the royal works and fortifications», between 1564 and 1590. Seventeenth century works are those of Forte do Pico in Funchal, Madeira (1611) and the forts at Natal (1614) and São Salvador da Bahia (1623) in Brazil.

Rafael Moreira says: «This constant circulation of people, ideas and forms between the three continents explains the parallels in constructions and urbanization that made military architecture the first international style of modern architecture.» Reference must also be made to the geometric layout of some newly-built and extensions of some existing cities between the end of the 16th century and the beginning of the following, some totally fortified, like Damão, in India or partially fortified as at Angra, in the Azores, Bairro Alto, in Lisbon and São Luís do Maranhão, in Brazil, the last-named being planned by the military engineer Frias de Mesquita in 1616.

Meanwhile, the crowns of Portugal and Spain were united between 1580 and 1640 under the rule of the Philips, who were Catholic, austere and supporters of the counter-reformation. This so-called «Iberian Union» would accentuate the interpenetration of the art of the Peninsula. But Portugal's triumph in the War of Restoration

for the country's independence would bring the dialogue between the Portuguese and Castilian cultures to a definite end and Portugal would turn to alternative renovating cultural sources, mainly Italian, French and English.

It was during this new «long period» that a stylistic and typological permanence became apparent in Portuguese architecture based on values obtained through treatises and practice. This fact was even more accentuated by the necessity to erect a lot of buildings in the several continents in the face of ever-diminishing financial resources.

In fact, it may be said that a Mannerist-based architecture became the order of the day, rooted in national models that were becoming defined and formally simplified by way of a traditional, vernacular influence over the erudite dimension — another subtle but permanent vector among the Portuguese. This architecture was based on plain, flat surfaces and clear volumes, purged of the excessive decoration that international Baroque then accepted. It was «baptised» as «Plain Architecture» by George Kubler. In a celebrated work, this author was of the opinion that it had existed between the periods of formation and dissolution, between 1521 and 1706, i.e. between the zenith of the Indian spice trade and the influx of gold from Brazil. Resisting Baroque, the «Plain Style» hung on as long as it could, overcoming temporary renovating trends and attempts at change.

The period of spiritual contemplation, a crisis of faith, the renewed effort of the Catholic religious orders against the «heretic», gave rise to an impetus of new ideas and the construction of new churches and convents both in mainland Portugal and in its overseas possessions from 1600.

The main examples of this period are the Jesuit colleges at Coimbra, the present «Sé Nova» (New Cathedral) built by Baltazar Álvares between 1598 and 1640, in Oporto, the Church of São Lourenço, or «dos Grilos», constructed between 1614 and 1709, and in Lisbon, the Church of Santo Antão, erected by Baltazar Álvares between 1613 and 1653 and since destroyed. Besides these are the enormous Benedictine constructions of the capital, which was built by Baltazar Álvares, has since been much altered and today houses the Legislative Assembly, of Oporto, constructed by Diogo Marques Lucas between 1604 and 1690 and since demolished, and of Coimbra, erected by Baltazar Álvares from 1576 and by Diogo Marques Lucas from 1604. The

renovation of the order's former seats at Santo Tirso (1679) and Tibães (1628-1661), by Giovanni Turriano, are the most impressive rural monuments of this phase.

The mendicant orders also carried out a lot of construction work in this period, the most important works being for the Barefoot Carmelites, such as the Monastery of Remédios at Évora by the «Hererian» Francisco de Mora between 1601 and 1614, an archetype that would be often copied later on, with a sober facade surmounted by a triangular pediment and a galilee of three arches, and for the Dominicans, with a monastery at Benfica in Lisbon from 1613. For the feminine orders, the Poor Clares' Convent of Santa Marta was built in Lisbon by Pedro Nunes Tinoco in 1616.

The simplicity of formal options can be seen in all these works, in an attitude of constant «stubbornness in the face of Baroque» in the words of Pais da Silva. In spite of everything, a relative difference can be felt between the architecture of the northwest (Oporto, Minho), which is more closely linked to the Flemish decorative tradition of the strapwork ornamentation, and that of the centre and south, which is more stereotyped within the «Serlian rules and the ordained influence of the architects of the King (Pedro Nunes Tinoco, 1604-1641) or of the House of the Queens (João Nunes Tinoco). Finally, one can see the influence of the theoretical teaching of architecture, often received via Spain or Italy begun, and centralized, with classes in the Paço da Ribeira (Riverside Palace) in 1549 and continued throughout the 17th century.

The extremely important role of the decorative arts in the promotion of this austere architecture must be stressed, especially in the application of yellow-blue and white-painted glazed tiles on vast interior surfaces, such as in the Church of Marvila in Santarém (1635-1639), or on exterior spaces, as in the gardens of the palace of the Marquis of Fronteira at Benfica, in Lisbon (1670), as well as in the use of gilt woodwork in church altars and pulpits, as it is in some way compensated for the excessive nudity of the structure.

As Yves Bottineau mentions, these religious models were «transported» to the Atlantic archipelagos of Madeira and the Azores, as can be seen in the Jesuit Colleges at Funchal, Angra (1658-76), Ponta Delgada (1625-66) and Horta, and in the innumerable Franciscan houses to be found near towns and villages. A creative and unique exception due to its Baroque lines is the mid-17th century facade of the Misericórdia of Ribeira Grande on the island of São Miguel. The rural

and suburban manor houses, which in mainland Portugal has a characteristic model with extensive parallelepiped volumes, two-storey facades, with the upper storey, being broken only by a line of bay windows, an elaborate portal and attached chapel, contain a series of regional variants in the islands, enhanced by the local volcanic rock and by the decorative «anti-sismic» symbolism.

In India, it was also the works of the Jesuits, plus those of the Augustines, that launched the models that would later be imitated and made popular in the suburbs of Goa, in the «northern strongholds» of Baçaim and Diu and in the southern possession of Cochim. Among many works, the following are the most outstanding: the Church of Bom Jesus in Old Goa (1594-1605), which was built with a single nave and facade without towers (inspired in the Church of Espírito Santo in Évora, constructed between 1556 and 1574), served as a model for the church of Margão and shows clear analogies with the College in Baçaim (1636) and the Church of São Paulo in Diu, today the Cathedral, erected by Father Gaspar Soares in 1601; the church of the Augustines (1597-1602), also in Old Goa, but today in ruins, which had two towers and a five-storey facade and was the inspiration for other works in the area that were already of an Indo-Portuguese culture, such as the Church of Santana of Talaulim on the Island of Goa; and finally the Church of São Caetano (1656-1661), a curious example inspired in St. Peter's of Rome, with a cupola and a rare Greek Cross plan that would later give rise to the little church with a false roof of scenic effect at Bardez in Goa. Reduced from the end of the 17th century to the vestiges of a decadent commercial empire, Portuguese India would not receive an artistic renovation comparable to that of Brazil at the same time, so that its architecture continued with the style inherited from Mannerism until well into the 18th century, when it ceased to be an original and vivacious style of its own.

In the Far East, almost all of the Portuguese works in Malacca, China and Japan have disappeared and the only thing left is a series of edifices in Macau the most outstanding of which is the Jesuit Church of São Paulo (1602-1626), a curious, original work of Sino-Luso-Japanese influence.

In Brazil, contrary to the evolution that took place in India, it was in the second half of the 17th century, after having expelled the Dutch and reacquiring political independence from the Spanish, that a new phase of construction began, following the rules of the «Plain

Style» that was «imported» from Lisbon. Germain Bazin, who made a deep study of this phase, refers to the church of the Jesuit College of São Salvador da Bahia, rebuilt between 1654 and 1694 and today the Cathedral, with its remarkable ceiling imitating the traditional barrel vault but built in good Brazilian wood, as one of the many proofs of the typological and technical synthesis achieved.

The «Jesuit style», which was started in Brazil with the Church of Graça in Olinda, Pernambuco, built between 1584 and 1592, would gather strength all over the territory from São Paulo to the Amazons, even in the 18th century. This can be seen in the churches of São Paulo (1661-1671), of Recife, Pernambuco (1689-1690) and of Belém do Pará (1700-1719). At the same time, parish churches, like the old «Cathedral» of Salvador in Bahia, built in 1660-1674 but already demolished, which followed the above mentioned model of Espírito Santo in Évora, and the Benedictine monasteries such as those of Rio de Janeiro (1668) and in Salvador (1679) also received a renovating impulse.

A new phase, the so-called «restoration architecture», began in Portugal following the restoration of the country's political independence in 1640, a phase which marked the cultural transition from the «Plain Style» to Late Baroque. The latter was mainly of Italian inspiration. José Fernandes Pereira considers this phase to be an experimental period (1651-1690) that saw the return of the Greek Cross church, such as the Church of Piedade in Santarém, built by Jacome Mendes in 1664, the revival of theoretical teaching, with the «Lectures on Fortifications» by Serrão Pimentel as from 1647, and the regional influence in Vila Viçosa of the Court of the Bragança dynasty that reigned from 1640, the pattern for which was set by the church of the Augustinians, constructed between 1635 and 1677 and possessing a wide, expressive arch in the facade.

This was a period of uncertainty, due to the economic and military situation on the one hand and the desire for renovation on the other. According to Horta Correia, this gave rise to the churches of «transition or continuation», such as São João Baptista in Angra (1642), Santa Clara in Coimbra (1649-1696), built by Giovanni Turriano, the Jesuit College in Santarém, constructed by Mateus de Couto in 1647, and the College of Portimão in the Algarve (1660), probably built by João Nunes Tinoco.

This was followed by a phase of stylistic definition from 1690 to 1717, the masterpiece of which — and perhaps the only true Baroque

work in the country, scenically placed overlooking the river Tagus and the eastern hills of Lisbon — the Church of Santa Engrácia, erected by João Antunes between 1681 and 1713, would remain unfinished.

At the same time, and returning to the Greek Cross plan that was so popular during the Baroque period, experiments were made with octogonal naves in churches, as was the case of the Church of Bom Jesus da Cruz in Barcelos, built by João Antunes between 1701 and 1704, and the Church of Menino Jesus in Lisbon, constructed by Costa Negreiros or João Antunes from 1711 to 1737. This type of church would appear in the Atlantic archipelagos later, the Church of São Pedro in Ponta Delgada being built between 1737 and 1748. Experiments with the new language were made in sporadic works in the north and centre of the country, like those made by Carlos Gimac in the church of Arouca in 1703, the wall and stairway of the Monastery of Tibães (1725-1734), also rather late, and by Claude Laprade in the facade of Coimbra University Library, plus those carried out in the undulating facade of the Church of São Filipe in Estremoz in the Alentejo in 1697. Reference must also be made to the Church of Nossa Senhora do Cabo Espichel (1701-1704), designed by João Antunes in order to consecrate the sanctuary that is to be found not far from Lisbon.

The beginning of the 18th century saw the launching of the so-called «age of the masters» in the application of glazed tiles in architecture, with large works of individualistic expression executed, and frequently signed, by artists of renown. This was the phase in which Dutch tiles were imitated, but many tile factories opened between 1725 and 1755. The best examples of tiles executed by «masters» are those of the nave of the Church of Santiago in Évora, with panels painted by Gabriel del Barco in 1699-1700, and those that line the vaulting of the Church of Mercês in Lisbon, a work executed by António de Oliveira Bernardes circa 1714. From the time that the style was spreading, reference can be made to the blue and white tile panels that line of the landings of the College of Santo Antão-o-Novo in Lisbon (c. 1730), in the present day São José Hospital, a Jesuit work of theatrical effect, and the magnificent panels in the Convent of Vilar de Frades in Barcelos (1742).

After 1717, there was a dispersion of stylistic trends, which had meanwhile matured, accompanied by a «regional» diversity in architectonic evolution. In first place is the «Court Baroque» of Lisbon.

Opulent and grandiose, backed up by Brazilian gold, the urge of King João V and the participation of invited foreign artists, innumerable works were erected. Among them were the Monastery of Mafra, built between 1715 and 1750 by Ludovice, Custódio Vieira, Manuel da Maia and Canevari, the Aqueduto das Águas Livres, the greatest work since the Romans according to a saying of the time, the ensemble of the Estate of Santo Antão do Tojal, constructed by Canevari from 1728 to 1732, the Opera of Terreiro do Paço, erected by Bibiena in 1733 and destroyed by the 1755 earthquake, the Chapel of São João Baptista, installed in the Church of São Roque by Vanvitelli and Salvi between 1742 and 1750, the Royal Palace of Queluz, started by Mateus Vicente in 1758, and the Palace of Necessidades at Alcântara, Lisbon, begun by Tomás Caetano de Sousa in 1742. In all these works, Italianised forms are blended with vestiges of the traditional «Plain» style, plus suggestions of «Rocaille» and even signs of neoclassicism, as in the Chapel of São João Baptista.

In the autonomous «Northern Baroque», which lasted from 1725 to 1769, are more exuberant works that are almost always linked to the initiative of the clergy. The most outstanding architect of this period was the Italian Nicolau Nasoni, who settled in Portugal and carried out a lot of work, mainly in Oporto. He was responsible for the Church of Clérigos (1732-1748), the ex-libris of Oporto, the Palace of Mateus near Vila Real in the Trás-os-Montes (1739), the former nucleus of the Church of Misericórdia in Oporto (1749) and the Freixo Palace, an unusual building on the outskirts of the city.

In Braga, the traditional religious capital of the country, mention must be made of two architects who followed Nasoni, André Soares, responsible for Santa Maria de Falperra (1753-1755) and the «Casa do Raio» (1754), and Carlos Amarante, who designed the «stairways» that lead up to the typical sanctuaries of northern romaries, the most outstanding of them being the one of Bom Jesus do Monte (1776).

The period from 1755 to 1780 was one of decadence or, one may say, of continuation of this style architecture. This is patent in works in Lisbon like the Basilica of Estrela, erected by Mateus Vicente and Reynaldo Manuel between 1779 and 1790, the Church of Santo António, also the work of Mateus Vicente from 1767 to 1787, and the Chapel of Bemposta, built by Manuel Caetano de Sousa in 1793. This regionalized tendency was felt in the provinces in the struggle against the new neo-classic trend in works like the Church of São Bento

in Oporto, built by Manuel Álvares in 1784, and the Natural History Museum of Coimbra University, constructed by Elsdén in 1772.

The building of octagonal churches was reflected in Brazil, such as the Church of Conceição da Praia in São Salvador da Bahia, transported stone by stone from Portugal between 1739 and 1765, and the Church of Nossa Senhora do Outeiro in Rio de Janeiro (1714). But a local style that was autonomous in relation to its Iberian counterpart was already taking shape with the works executed with the wealth produced by the Minas Gerais «gold rush». This autonomy is visible in the brilliant work of «Aleijadinho» (The Cripple), from the hilltop sanctuary of Bom Jesus de Matosinhos, in Congonhas do Campo (1757-1780), to the Chapel of the Third Order of St. Francis in Ouro Preto (1684-1692).

The crucial and innovative moment of Portuguese architecture of this period came in the reign of King José and his First Minister, the Marquis of Pombal, with the new urbanization plans and the rebuilding that took place after the devastating earthquake of 1755. In fact, the earthquake, which destroyed the centre of Lisbon and other cities in the south of the country, the new cities that grew up in Portugal, Brazil and, to a lesser degree, in Africa and the economic boom of the city of Oporto via the English colony linked to the Port Wine trade were determining factors in this process.

The pragmatic ideals plus the functional demands of the time generated an architecture «without style» in the traditional sense, as it followed the «plain» tendency of the military engineers, referred to «Rocaille» ideals for detail, searched for a temporarily precociousness, if seen in a European context, in neo-classicism and was steeped in several different sources of influence.

A secular architecture of a utilitarian bent, aimed at building dwellings and public amenities, would appear in the form of the industrial area of Amoreiras, in the shadow of the «Mãe d'Água» water works built by Carlos Mardel in the first half of the 18th century, the geometrically-laid-out «Downtown» of Lisbon, completely reconstructed from Rossio to Praça do Comércio, the port area of Cais do Sodré and the elegant hillsides of Chiado and the Cathedral, under construction since 1756.

This architecture was also applied to the small new towns that were built in the provinces, the best example being Vila Real de Santo António, in the Algarve, founded in 1774. The city of Oporto launched a series of urban extensions and rules of occupation, through

both the initiative of Pombal's nominee João de Almeida (São João Street, as from 1757, the Relação Prison, 1764) and the English, who used an «imported» neo-classic style influenced by the Italian Andre Palladio (Ribeira Square, 1765, the English Factory, built by the English consul Whitehead between 1785 and 1790, and St. Anthony's Hospital, projected by John Carr in 1769).

From Neo-Classic to the End of the 20th Century

From a general point of view, Portuguese architecture of the last 200 years does not show great creativity or the originality of the previous period when seen in a European context.

Despite this, reference can be made to the 19th century revival of colonization in Africa and India and its consequences in urbanization and architecture and the consolidation of a regional «school» of modern architecture of high quality in the city of Oporto since the beginning of the 20th century.

The period between 1807 and 1852 was one of great instability for Portugal owing to the Napoleonic invasions, the unilateral declaration of independence of Brazil and the civil war between the liberals and absolutists and the successive political, economic and social crises that resulted from these events. It was only with the «Regeneration» governments of the middle of the century that the country became sufficiently stable to enable the launching of a new coherent and modernising architectonic project.

Up to that point, a predominantly international neo-classic tendency subsisted in the few significant works that were undertaken. The authors of these works in Lisbon were the two architects that designed the then-unfinished Royal Palace of Ajuda, Costa e Silva, responsible for the magnificent São Carlos opera house in 1793, and Fabri, who built the Santa Clara Naval Hospital in 1797. In the suburbs of the capital, residences that were somewhere between a «manor house» and a «small palace» (the Pombal Palace at Queluz, 1795, and the Seteais Palace at Sintra, 1787) were erected with a mixture of the classic taste, elements of the «Rocaille» and Pombaline, but already showing signs of «pre-Romanticism».

The neo-classic style also appeared in the provinces, in the form of the square and palace of Manique do Intendente in the Estremadura, built by Fortunato de Novais between 1794 and 1807, the Runa Old Soldier's Home, started by Costa e Silva in 1792, the Observatory of Coimbra University, in Pombaline style, the impressive Convent of Santa Clara at Vila do Conde, begun by the «master stonemason» Ventura Lobo in 1777, and the parish church of Tavira by Fabri.

In Oporto, continuing the tradition launched by the English, the style appeared in works like the Church of Trindade (1803) and the Naval Academy (1807), both constructed by Carlos Amarante, and the Church of Ordem Terceira de São Francisco (Third Order of St. Francis) (1792) by Pinto de Miranda.

Later works that remained faithful to the neo-classic taste but which included some eclectic-Romantic decoration are the «Palácio da Bolsa» (Stock Exchange Palace) in Oporto (1842), built by Costa Lima, who was also responsible for the new Angra Town Hall in the Azores between 1849 and 1879, the D. Maria II National Theatre in Lisbon, constructed by Fortunato Lodi between 1842-46, and the Lisbon City Hall, erected by Domingos Parente in 1866.

Romanticism started in Portugal with the modernization programme of the Minister for Public Works Fontes Pereira de Melo. Seemingly antagonistic concepts, «modernity» and the «Romantic ideal» gave rise to three emblematic works. The first was the grandiose Pena Palace at Sintra, the only true Romantic monument in the country. It was built between 1839 and 1885, around the nucleus of an old monastery on top of a hill, by Baron von Eschwege on the orders of King Fernando II. It is a kind of false, revivalist medieval castle, evoking Gothic, Manueline and Oriental styles. The second was the «Palácio de Cristal» (Crystal Palace) in Oporto, conceived from the English «Iron Architecture» and imported from British factories between 1861-65. Made in Manchester for the city's industrial association, it was the work of the architect T. Dillon Jones and the engineer F. W. Shields. The third was the iron D. Maria Pia Bridge that spans the river Douro at Oporto. It was designed by Gustave Eiffel in 1876, within the scope of the policy to improve the transport system of the country.

Through the dates and names mentioned it can be seen that the importation of foreign artists and technology was patent in the second half of the 19th century. This led to a certain separation

of the country from the industrial evolution of the rest of Europe that the reforming of the teaching of the arts, carried out with the founding of the Academies of Fine Arts of Lisbon and Oporto in 1836, could not attenuate.

It was the golden age of revivalism and it would continue up to the beginning of the 20th century. It embraced the «neo-Arab» taste which can be seen in the Arab Room in Oporto Stock Exchange, decorated by Gonçalves de Sousa between 1862 and 1880, in A. T. Fonseca's Relógio Estate in Sintra (1850) and in the Campo Pequeno Bullring in Lisbon, constructed by Dias da Silva in 1892. The «neo-Oriental» design can be seen in the Monserrate Palace in Sintra, erected by James Knowles Júnior in 1863-1865, and in the small Ribeira da Cunha Palace in Lisbon (1877). The «medieval-Gothic» taste is to be found in the Countess of Edla's «chalet» in Sintra (1860), in the feigned ruins constructed by Cinatti in Évora in 1865 and in the parish church of Reguengos de Monsaraz, built by Dias da Silva at the beginning of the 20th century.

Within the same mainstream of this «recreation of the past», the «neo-Manueline» taste appeared in 80's of the last century in urban constructions and redolent with nationalist sentiments. This is manifested in the Rossio Railway Station in Lisbon, built by José Luís Monteiro in 1886-1887, and in the Palace Hotel at Buçaco, erected by Luigi Manini in 1888-1907.

At the same time, «architecture in iron» became common in urban applications, beginning with the construction of amenities. At first the decorative elements of constructions in the new material imitated the traditional «classic» or «Gothic» forms that had until then been used in stone and masonry. Then it progressively passed from a discreet use in interiors and utilitarian buildings to a more urban and «daring» application in facades and buildings in the centre of cities. The evolution in its use can be clearly seen in the capital — in the «panoptic» and the wings of the Penitentiary in superimposed galleries, constructed in 1874-1878, in the vast market built by the engineer Ricardo Correia in Figueira Square (1875-85), in the Tapada da Ajuda Exhibitions Pavillion erected by Luís Caetano de Ávila in 1884, in the luxurious «Portugal Salon» in the Geographic Society, constructed by José Luís Monteiro in the Portas de Santo Antão Street in 1897, in the Auto-Palace Garage in Rato Square, by Vieillard & Touzet — Guilherme F. Baracho in 1906 and in the Paris — style department store Grandella, built by George Demay in 1906-1907.

Iron was also applied in housing in the same period, being used to construct galleries in working-class housing estates and courtyards and to close the back verandahs of rented flats. These simple structural undertakings were almost always in opposition to the «prestigious» eclectic and revivalist facades.

Keeping in step with the opening of new avenues and boulevards in the urban renovation and extension under way in Portugal's biggest cities at the turn of the century, a new generation of architects that were trained in or influenced by the environment of the Parisian «Beaux-Arts» or any other international eclecticism tried to impose a certain stylistic renovation in architecture.

They resorted to the sobriety of neo-Romanesque (the headquarters of the Martins Sarmiento Society in Guimarães, built by Marques da Silva in 1900), which was then considered by some to be a possible archetype of the «true» Portuguese architecture, a thesis backed up by the existence and significance of the Romanesque-medieval «Domus Municipalis» in the castle of Bragança. Others were carried along by the «Art Nouveau» design of French origin, turning it into a Portuguese «Arte Nova» of more sober lines (no. 57, Rua Alexandre Herculano in Lisbon, built by Ventura Terra in 1903) and supported by the application of the traditional glazed tiles. Raul Lino diverged from this path when he reinvented the taste for the old-style «casa portuguesa» (Portuguese house), Moorish and «plain», in the houses of «Monsalvat» in Monte Estoril (1902) and Cipreste in Sintra (1912).

An improved integration of the new materials with the architectural design was tried in public works such as the Luís de Camões High School in Lisbon, built by Ventura Terra in 1907, in the sanatorium constructed at Parede by Resende Carvalheira between 1901 and 1903 and in the «A Voz do Operário» school built in Lisbon by Norte Júnior in 1914.

The appearance of a new material, reinforced concrete, in the 20's coincided with the post-war financial crisis that the Republican regime that had come to power in 1910 was unable to overcome. This gave rise to some «structural» works that were enhanced by the plasticity of the new constructions. In the Nascimento department store in Oporto, erected by Marques da Silva between 1914 and 1922, the oblique lines of the interior stairway can be seen through the glass facade. The «Clínica Heliantia» of Francelos, constructed in the suburbs of the same city by Oliveira Ferreira in 1929, takes advantage

of the rhythm and outlines of the system of buttressed and freestanding pillars in an open-space. A remarkable and innovative system of movable seating on rotating plaques of reinforced concrete (since demolished) was concealed behind a Baroque-style facade of the gymnasio theatre in Trindade Street in Lisbon, which was built by João Antunes in 1923-1925. And in the Capitólio theatre in the Parque Mayer in Lisbon (1925-1931), Cristino da Silva launched the idea of a big open-space theatre without internal supporting columns and with a terrace that could be used for cinema. It has since been partially altered.

The establishment of the so-called «second generation» of «modern» architects (referred to by José-Augusto França), who would define the «modernist» architecture of the 30's, happened at the same time that the dictatorial regime of Salazar was set up (1928), thus preparing the way for the institutionalization of the New State. The dynamic minister Duarte Pacheco launched an intensive «policy of public works») from 1932 to 1940 in order to combat the inherited unemployment, to strengthen the political confidence of the people and as a means of propaganda. He ordered the completion of works left unfinished by the First Republic and started many others, following a programme of systematic modernization of the postal and telephone services, roads, state banks, etc.

For all this, Pacheco counted on the support of architects and other construction experts, who were looking forward to participating in the new age of modernization. Advantage was taken of cheap labour in grandiose non-residential buildings, especially in Lisbon, in an «eclectic-modernist» architecture on a grand scale and that still accepted suggestions of Art Deco. The Engineering University and the National Institute of Statistics, both built by Pardal Monteiro, the «architect of public works», from 1927 to 1935, and the National Mint, constructed by Jorge Segurado between 1934-1938, all three in Lisbon, and the Massarelos Fish Market in Oporto, built by Januário Godinho in 1930, are examples of this age.

Throughout the 30's, private initiative architecture also adopted this new abstract, purist language, which was transmitted through a play on volumes, geometrically designed stained glass windows, cylindrical iron tubes and neons. With works mainly in Lisbon and Oporto, where the country's two schools of architecture, descendants of the 19th century academies, were established, this aestheticism of cosmopolitan taste would be impregnated into all the new

non-residential urban constructions. There are two works of note of this period in Lisbon, the Eden Cinema in Restauradores (1930) and the Hotel Vitória in the Avenida da Liberdade (1934), both the responsibility of Cassiano Branco, who was also the author of so many facades of «modernist» residential buildings in the capital. The «Comércio do Porto» garage, built by Rogério de Azevedo in 1930, and the «Vitalia» chemist's erected by Manuel Mendes, are of note in Oporto.

As from the «Exhibition of the Portuguese World» in 1940, and keeping in step with the return to traditional values in plastic arts in Europe, a historicist and neo-academic taste appears once more as a reaction, supported by the New State, against «cubist internationalism». Areeiro Square in Lisbon, designed by Cristino da Silva and finished in 1948, constructed with a structure of reinforced concrete formally disguised and distorted by neo-18th century forms and reflecting a classical and «harsh» Italian and German influence in its arcades, cornices and roofs, is a symbol and agent of this turn-about.

After the 2nd World War, the adoption of the models defined in the «Charter of Athens» — the pattern and the basis for the expression of the «Modern Movement» in architecture — was undertaken very slowly owing to the survival of a regime that was politically behind the times and increasingly reactionary. It would be gradually introduced into the municipal housing programmes in Lisbon during the 50's and 60's in the carrying out of the Alvalade Project of Faria da Costa and later in a similar plan for North and South Olivais that was the responsibility of Carlos Duarte and Rafael Botelho. This was a period when a new generation of architects came on to the stage and reacted against the «stubborn persistence» of the «authoritarian» models of the state that their colleagues of the previous generation had helped to establish. The «Survey of Popular Architecture», carried out on the initiative of Keil do Amaral between 1956 and 1961, helped to provide a new and «liberated» view of the architectural patterns to follow and brought a proposal «to return to vernacular sources» as the basis of a new language.

The outstanding names of the dynamic «Oporto school» of the 50's and 60's were Carlos Ramos, its director and eminent pedagogue, and Fernando Távora, author of the Vila da Feira Market from 1952 to 1959, whose structural plasticity started a new trend for this type of construction. They were followed a little later by Siza Vieira, who was linked to the organicism of Alvar Aalto, with his

tea-rooms at Boa Nova in Matosinhos between 1958-1963. In the area of Lisbon, reference must be made to the work of Nuno Teotónio Pereira, with his «Águas Livres» block of flats (1953-1955), the design of which was a rupture with the traditional closed, four-sided block, and the notable interior designer Francisco Conceição Silva, with his «Rampa» shop (1955), and tourist undertakings like the Hotel do Mar at Sesimbra (1963).

The period between 1964 and 1974 was a time of accelerated economic growth and political crisis, plus colonial wars in Africa that would finally bring about the collapse of the authoritarian regime. A tourist boom in the Algarve, in Vilamoura, Albufeira and Lagos, the urban «explosion» in the services sector and office space in the centres of the biggest cities and the phenomenon of suburban and clandestine construction, side by side with social housing programmes of the state Housing Development Fund, are visible signs of this period.

New faces made their mark on this period, names like Conceição Silva, Maurício de Vasconcelos and Tomás Taveira in the Hotel da Balaia in the Algarve (1969-1971), Fernando Silva in the «Shell» building in the Avenida da Liberdade in Lisbon in the 60's and Nuno Teotónio Pereira with «Franjinhas» on the corner of Braamcamp and Castilho Avenues (1971) also in Lisbon.

Important undertakings were the Integrated Plans for Setúbal (by Charters Monteiro) and Almada-Caparica and the «new towns» of Santo André, a satellite town of the industrial undertaking of Sines in the Alentejo planned by Silva Dias and Câncio Martins, and Vilamoura in the Algarve, planned by Costa Lobo.

Mention must also be made of the construction of public buildings carried out in the provinces, such as the new hospitals of Portalegre by Vasconcelos Esteves, of Beja by Chorão Ramalho and Bragança by Viana de Lima, schools like the School of Agronomy in Évora by Manuel Tainha (1965) and the standard design for grammar school drawn up by Augusto Brandão. Churches were also built, like the ones of Carvalhido and Nevogilde constructed by Luís Cunha in Oporto in 1972 and the Sagrado Coração de Jesus by Teotónio Pereira, Nuno Portas, Pedro Vieira de Almeida, Vasco Lobo and Vítor Figueiredo in Lisbon between 1962 and 1970. In the African colonies, the personalised works of Vieira da Costa (1911-1982) of blocks of flats and public works in Angola and the villas and small blocks of flats of Pancho Guedes (1926) in Mozambique are worthy of mention.

Following the democratic revolution of 1974 and the initial period of politico-economic instability, a talented generation of new architects came to the forefront, especially in the 80's. These included Tomás Taveira, with his polychrome blocks of offices and flats like the Amoreiras centre and the headquarters of the Banco Nacional Ultramarino in Lisbon, Manuel Vicente, in social housing and public works programmes, mainly on Macau, Siza Vieira, of international reputation and with works at Évora, Lisbon and, above all, in the area of Oporto and Minho, Luís Cunha, whose very personal post-Modernist taste gave rise to curious works in the Azores (an auditorium at Ponta Delgada) and Lisbon (the church at Portela), Hestnes Ferreira with interesting public works in Lisbon like the Benfica High School and cooperative housing estates in Beja in the Alentejo, Alcino Soutinho, with the notable museum and library at Amarante, and Vítor Figueiredo, with his social blocks of flats at Chelas in Lisbon and at Zambujal.

Throughout the 80's, other younger architects demonstrated the vitality and energy of the present phase of Portuguese architecture, even though it is dispersed and fragmented a «myriad» trends and territories. Without worrying about an exhaustive or systematic presentation, the following names are worth of note: António Miguel [Alcântara market and the facade of the «Casa dos Bicos» (House of the Pointed Stones), both in Lisbon]; Gonçalo Byrne (SAAL housing estate in Setúbal, Caixa Geral de Depósitos at Vidigueira), Arsénio Cordeiro (headquarters of the Caixa Geral de Depósitos, the Torre do Tombo National Archive, both in Lisbon, with Barreiros Ferreira), Nunes de Almeida (headquarters of Lloyds Bank, Avenida da Liberdade, Lisbon), Alberto Oliveira (Campo de Ourique market and its enlargement with Daniel Santa Rita and Rosário Venade), Farelo Pinto (schools at Torres Vedras and Ponta Delgada), João Paciência (Bombarral High School with Carlos Travassos, blocks of flats at Telheiras), João Paulo Conceição and António Braga (Lisbon Mosque), Eduardo Souto Moura (Braga market), Adalberto Dias (public works in the Oporto areal), António Lima (shops and houses in Vila Real, in Trás-os-Montes), Júlio Teles Grilo (public buildings and housing in the area of Chaves), Manuel Graça Dias (the «Golfinho» block in Chaves, the remodelling of the «Espelho d'Água» in Belém in Lisbon, the latter with Egas Vieira), and Carrilho da Graça (the Portalegre Social Security Centre, a bank at Anadia).

Other young artists who were either born or have settled in the Atlantic archipelagos and Macao have been making a name for themselves in those areas. Among them are João Francisco Caires (innumerable shops and public buildings in Funchal), João Maia Macedo (the «Canto da Fontinha» building in Ponta Delgada), Irene Ó and A. Bruno Soares (office blocks in Macao and a swimming pool at Coloane), Adalberto Tenreiro (public buildings in Macau), and Paulo Samnarful (housing in Coloane). This goes to prove that the open and multifaceted «feeling» of Portuguese architecture has not been lost.

4.

GREAT WORKS AND THEIR ARCHITECTS

Contents and Criteria

In this chapter, it is intended to present a choice of outstanding works and eminent architects in the history of Portuguese architecture and establish a link between the two whenever possible.

Of the vast choice available, 17 works and an identical number of authors were chosen, covering a period from the 15th century until nowadays, which, as we have seen, has been a phase of maturity and the one that best portrays the architectonic production of the country. Although recognising the difficulty in making such a choice, an attempt has been made to lay stress on authors and works that have a collective and, wherever possible, an international significance. Reference is made to original works, here described in some detail, taking into account the overall scope of the chapter. Emphasis must be laid on the large number of authors chosen who were of foreign origin but who settled in Portugal and managed to identify themselves with the traditions of our architecture.

As reference has already been made to overseas works in other chapters, this chapter will be limited to buildings constructed in mainland Portugal. This does not mean, however, that there are no notable works overseas worthy of mention in these pages as a part of Portuguese architectural tradition. It would be enough to refer to the cistern of Mazagan (Morocco), the Jesuit churches of Diu (Índia) and Salvador da Bahia (Brazil) or the Baroque churches Congonhas (Minas Gerais, Brazil) and Ribeira Grande (Azores).

In the same way, several authors mentioned worked in other geographical areas and environments, both in the overseas colonies (the Arrudas, Cassiano Branco) and in other European countries (Francisco de Holanda, Siza Vieira).

An attempt has been made to point out the most outstanding work of each author (in some cases, several of the authors mentioned worked on the same building or, in two cases, notable works that bear the signature of more than one artist are mentioned).

Afonso Domingues and Batalha

Afonso Domingues has been chosen to perform the «symbolic opening» of this chapter. Linked to the work of the «Real Mosteiro de Santa Maria da Vitória», or Batalha, in the suburbs of Leiria (Estremadura), a vast ensemble that was erected to commemorate the establishment of a new Portuguese dynasty and independence in relation to Castile, he is generally considered to be its first architect (1388-1402). He was also the first architect to stand out at the birth of Portugal's modern age. He built the church, nave, sacristy and Chapter House in traditional Portuguese Gothic. It is thought that the daring vaulting of the Chapter House was the work of Huguet.

His participation in the building of Batalha was enveloped in legends that were exploited by the writers of the Romantic period, such as Alexandre Herculano. Domingues divided the work of Batalha with master Huguet, who succeeded him in 1402 and worked there till 1438. Mário T. Chicó claims that Domingues' work was inspired in the Lisbon Cathedral, which «may have been one of the main sources of inspiration for our most beautiful Gothic church before the English influence began to be felt».

The building of Batalha, as it is generally known, was a long, drawn-out affair. Reynaldo dos Santos refers to the phase of Kings João I and Duarte, which lasted from 1388 to 1438 and which «possesses the harmony of a plan that was followed within the evolution of a style». Following Domingues in this phase, Huguet executed the «Capela do Fundador» (Founder's Chapel) and began the pantheon of King Duarte in the famous «Capelas Imperfeitas» (Unfinished Chapels), the octagonal outlines of which, together with the mysterious origins of the architect, leads one to think that they could have been of Oriental inspiration. This was followed by the period of King Afonso V (1438-1477), during which a new cloister was constructed,

and the Manueline phase (1480-1515), during which Mateus Fernandes carried out some essential work on and executed the portal of the Unfinished Chapels and Diogo Boytac probably put the magnificent finishing touches to the Royal Coister. Although building continued up to the end of the 16th century, these were the main phases of the work.

Batalha is a collective work that was the beginning of a mature «national» architecture and which was the link between the new dynasty and the Discoveries. As such, attempts have been made to symbolically interpret its formal and spatial structure as the «key» to the sea-way to India. According to Manuel Joaquim Gândara, Batalha is a «map in stone». The Founder's Chapel is the peninsular head, the nave is Europe and the Unfinished Chapels represent India. Like this, from the mausoleum of the founder of the dynasty one would have to walk around the outside of the building — the equivalent of circumnavigating Africa — and enter the latter chapels by way of a concealed door as they cannot be reached through the nave.

The Tower of Belém and Francisco de Arruda

A «small jewel» of military architecture, the Bulwark of Belém, its full name being «Castelo de São Vicente a par de Belém» (The Castle of St. Vincent in front of Belém), was erected between 1515 and 1519 (or 1521) by Francisco de Arruda, a master who came from a family of architects and engineers and who also worked in the Alentejo and North Africa. It is his most notable work and is unique in the field of military architecture.

Francisco de Arruda (d. 1547) had worked on the castles of Moura, Mourão and Portel in 1510. In 1514, he was at Azamor with his brother Diogo de Arruda, with whom he carried out work on several fortresses in Morocco, including Ceuta and Safim. The Castle of Évora Monte in the Alentejo, built in 1531, is also attributed to either Francisco or Diogo. The latter died in the same year and Francisco was appointed, according to Sousa Viterbo, to the three posts that had been held by his brother — «Master of Works of the District of Alentejo and of the Palace of Évora and Surveyor of Public Works».

Sousa Viterbo also refers to Arruda's appointment, in 1542, as «Inspector of the Conduit of the Prata de Évora», the famous aqueduct that provided the city's water supply.

One of the main exponents of the Manueline taste, Francisco de Arruda perceived that he could blend Italian Renaissance motifs into his decoration, contrary to his brother Diogo. The former was more moderate in the use of his decoration, as Pedro Dias says: «We are perhaps in the presence of two sensibilities: one of the traditional master builder and the other of a 16th century neo-Vitruvian architect.»

The «Baluarte do Restelo» (Bulwark of Restelo) was probably conceived as a complement or a contrast to the Monastery of Jerónimos, a kind of «ship in stone», a symbol of a transatlantic voyage. It was originally in the middle of the river and has only been connected to the bank, which it probably defended symbolically, since the recent silting up of the Tagus.

Possessing a nostalgia for its long-lost military function, it was almost obsolete at the time it was built due to the advances made in artillery, the tower is a transition from the medieval concept of a keep to a low-lying polygonal bulwark with artillery. Rafael Moreira compares it to the models of military architecture designed by Francesco Giorgio Martini of Florence in 1490, while its delicate decoration reminds Reynaldo dos Santos of the Coutobia dome in Marakesh, the famous 12th century Almuaden minaret that dominated the region where the Arrudas worked for two years as masters of the fortifications.

With its verandahs sculptured in delicate white stone and possessing no guns, the function of the graceful and original Tower of Belém can be better understood «as a privileged stage the ceremonial departure of the fleets... from where the monarch and the court could watch and be a part of the scenes that were so popular at the time and which were a part of the liturgy of Renaissance royal power» (Pedro Dias).

Jerónimos: From Diogo Boytac to João de Castilho

The «Real Mosteiro de Santa Maria de Belém», or Jerónimos, in Lisbon, is the «successor» of Batalha. It is a vast, incomplete building

and the fruit of successive phases in which several famous and talented architects were «blended».

Diogo Boytac (1460-1528) was French. He had been in Portugal since 1490, when he built the Monastery of Jesus in Setúbal. He drew up the original plans for Jerónimos in 1498-1500 and it was here that he developed to the full the style that would become known as Manueline. Conceiving a building that was much bigger than the one actually constructed, he designed the church and the cloister, outstanding of which is the south portal with its magnificent ensemble of sculpture.

Boytac was followed by João de Castilho (1475-1552), a Biscayan from Santander. Between 1475 and 1530, according to Rafael Moreira, «this brilliant, tireless architect introduced inovating solutions that produced some of the best parts of the building: the vaulting and pillars of the church, the upper gallery of the cloister, the sacristy». He used the transition style of a Manueline context blended with the motifs of the Italian Renaissance and he left his mark deeply stamped on the building.

Reference must also be made to two other architects who worked on the building. The first is Diogo de Torralva (c. 1500-1566) considered by Rafael Moreira to be the «greatest architect of the Portuguese Late Renaissance». He was the master of the works between 1540 and 1551. He worked on the choir, the upper gallery of the cloister and its platband, following a pure Renaissance design. The second is Jerome of Rouen (1530-1601), who was practically the last person to work on the building until the restoration work that was carried out in the 19th and 20th centuries. He worked in Jerónimos from 1563, rebuilding the chancel in Renaissance style and completing the work in the interior of the transept.

A symbol of the Discoveries and built to commemorate Vasco da Gama's first voyage to India, Jerónimos is an «agent» of the architectural language of transition, from the Final Gothic to the Classical, with the maritime discoveries serving as the figurative poetry that permeates the decoration. And at the same time it is a structural and spatial reflection on the essence of Portuguese architecture of the age, a cross between the southern-muslim tradition — seen in the static feeling of the enormous «frame» of the nave, reminiscent of the pluri-vectorial space of a mosque — and the Central European origins of Gothic — seen in the vertical and directional sense in the proportions of the nave.

*Tomar of the Templars:
The Cloister of Diogo Torralva*

The Castle and Monastery of the Templars (later the Convento de Cristo, Monastery of Christ in English) in Tomar was a long and complex undertaking. It was the third of the «great Portuguese architectural sagas» of the end of the Middle Ages and the beginning of the Modern Age, the first two being Jerónimos and Batalha. The three form a kind of «sacred triangle» in the Estremadura region.

Founded in the 12th century, a circular chapel of Middle Eastern influence with an octagonal «passageway» around it was erected, which in the 16th century became the chancel of a new church of a single nave and with a portal by João de Castilho dated 1515. The new church, in turn, was enhanced by the Manueline Chapter house which still today bears, in the north-east wall, the famous «Window», which is the maximum expression of the decorative capacity of this style, especially when seen from the outside.

Without describing the whole of the ensemble, reference must be made to the João III Cloister, also known as the «Cloister of the Philips», the master-piece of the above mentioned Diogo de Torralva. He began the work in 1557, following the international norms of Mannerism and based on the initial design of João de Castilho. But on the orders of Quenn Catarina, regent after the death of her husband João III, Torralva designed a cloister with two galleries. The work was almost completed by 1562, but it was only at the beginning of the 17th century that it was finished by Terzi with the construction of the central fountain.

The formal complexity of the cloister was recently stressed by Robert Venturi in *Complexidade e Contradição na Arquitectura* (Complexity and Contradiction in Architecture) in which he draws the reader's attention to the functional ambiguity of the cylindrical elements of the angles. The ensemble follows the «Serlian» theory with scientific rigour and denotes a remarkable capacity to reinvent and combine elements, such as arches and columns, probably inspired in the drawings of the courtyard of the «Vila Imperial» in Pesaro, which were executed by Francisco de Holanda and recall the contemporary Basilica of Vicenza.

Torralva's work represents the height of the erudite Italian influence in Portugal of the time. Although being of «foreign» creation,

it expresses the origins of «Portuguese type» cloisters by following the simplicity of the «Plain style».

Diogo de Torralva (1500-1566), probably from Piedmont, came to Portugal at the time of King Manuel I and worked in Jerónimos. Reynaldo dos Santos attributes the Church of Graça in Évora, a remarkable, unusual Mannerist work executed in the 20's and 30's of the 16th century, to him, as well as the Church of Conceição in Tomar, of the middle of the same century, basing his thesis on the decorative motifs used, namely rosettes. In 1548, Torralva succeeded his father-in-law, Francisco de Arruda, as master of the works of the Alentejo and the Palace of Évora. According to Sousa Viterbo, he probably also worked on the Convent of Madre de Deus in Lisbon around 1551.

Francisco de Holanda and the «Buildings That Are Lacking...»

Innumerable works have defended contrary theses regarding this architect. Some authors attribute to him the conception of important Renaissance works in Portugal, others see him as a cultured and well-travelled diffusionist and theoretician.

Francisco de Holanda (1517-1584) «was, however, an artist of great merit [...] painter, architect, miniaturist, the only thing he did not use was the chisel [...] demonstrated his talent as a critic, writer and archaeologist» (Sousa Viterbo). «Without ever having been a painter or architect, he felt the problems of painting and architecture better than any other artist of his time.» (Rafael Moreira.)

He was born in Lisbon, son of a Dutch artist. He travelled in Europe and contacted the cultural elite of the Italian Renaissance, including Michaelangelo in Rome, where he resided from 1538 to 1540. Supported by King João III, he wrote, among other things, a treatise entitled *Of The Buildings That Are Lacking in Lisbon* in 1571, which was a vast ideal designed to make the capital a monumental and modern city. It was only published in the 19th century. It may have inspired the works on the cloister at Tomar, those on the fortress of Mazagan and others.

His overall contribution to the field of artistic ideas is a truly unusual and notable work. The vision of Lisbon that he proposed

included the prediction and foresight of monumental works of infrastructures such as water supply and bridges and public works like fortifications, churches and palaces, seeing the city as traditionally Latin and as the centre of an empire.

*Filipe Terzi and Baltazar Álvares:
From St. Vincent's to the New Cathedral of Coimbra*

The two most monumental churches that were built in Portugal in the transition from the 16th to the 17th century involve two architects of distinct birthrights and heirs of different traditions.

São Vicente de Fora (St. Vincent's Outside the Walls), built in Lisbon on the orders of King Philip of Spain, and Portugal, was started in 1590, «certainly based on a 'Herrerian' plan, erected by Filipe Terzi and Baltazar Álvares [...] it represents the entry of a new type of church into Portugal, the counter-reformation model of Roman Mannerism that was realised by Vignola in the Church of Gesu» (Horta Correia).

This model, which came to Portugal through the Spanish aestheticism of Herrera, was built on a Latin cross plan with a domed crossing, which collapsed during the 1755 earthquake, was new in this country and its impact was strengthened by its size and its spectacular location in the oldest part of the capital. On the other hand, its facade is in the traditional H shape, a central body with two flanking towers, a form which had been established in Portugal since the medieval Romanesque.

It is thought that the initial plan of the church had been made by Juan de Herrera or Filipe Terzi. The work on the church stretched into the 17th century, the facade and nave were finished in 1629, and were carried out by Baltazar Álvares, who, according to Horta Correia, «was the triumphal victor of the dispute between Herrera and Terzi».

The New Cathedral of Coimbra, originally constructed as a Jesuit church and also attributed to Baltazar Álvares, was begun in 1598 and work continued throughout the 17th century. The temple «was built following the Vincentine model» (Horta Correia), with an even more austere design and stockier proportions. The facade, which contains some proto-Baroque elements, is of a later date, the two traditional

towers being more withdrawn in relation to the frontal plane, which results in an ambiguity that expresses the hesitation between the «clear» Roman standard and the local traditional taste in regard to towers.

Although it is not a perfectly balanced work, it deserves mention here as it is representative of two most significant archetypes of our «Plain» religious architecture, owing to the formal simplicity and austerity of construction that it achieves, which would have an enormous influence on more or less identical building in innumerable secondary urban centres in both Portugal and its overseas possessions.

Filipe Terzi (1520-1597), was an Italian engineer and architect. He studied in Pesaro and in 1564 he was working in Urbino. He came to Lisbon in 1577 to work as a military architect. In the following year, he fought in the Battle of Alcazar-Kibir, in which the king of Portugal lost his life, being taken prisoner and later ransomed. He was sent to Coimbra in 1583 to inspect the bridge and the Monasteries of S. Francisco and Santa Clara. In 1584, he was appointed master of the works of the Monastery of Christ in Tomar and he built the aqueduct of that city. According to Sousa Viterbo, Terzi «seems to have been the first official teacher of architecture in our country», in 1594.

He met Juan de Herrera during a visit of Philip II of Spain to Portugal and in 1581 he built the palace tower for this monarch in the Terreiro do Paço in Lisbon, which was destroyed by the 1755 earthquake. The facade and roof of the Church of São Roque in Lisbon (1582-1586), the College of Santo Agostinho in Coimbra (1593), the Monastery of Palmela (1596) and, possibly, the Castle of São Filipe in Setúbal and the Convent of Cartuxa in Évora are attributed to him.

Today, as Horta Correia mentions, there are «increasing doubts about Terzi's role as an architectural planner and it is thought that he may have been more active in the fields of pedagogy and administration than in architecture itself. There is no doubt that he was the engineer in charge of public works and was directly responsible for the construction of both military and public buildings».

Baltazar Álvares (d. 1624), possibly nephew of Afonso Álvares, succeeded the latter as «master of public works for the district of Alentejo» in 1580. In 1581, he was appointed master of the works of the palaces of Santarém, Almeirim and Salvaterra, as well as of the Monastery of Batalha.

Horta Correia wrote: «A key figure of his time, the royal architect Baltazar Álvares blended the vernacular tradition that he had acquired while working with his uncle Afonso Álvares and the results of his apprenticeship served in Italy in his decisive work in São Vicente de Fora. The Society of Jesus would call on him for the construction of its most important colleges.»

After succeeding his uncle in the work on the Church of São Roque in 1575, he worked on the new, grandiose college in the capital. His greatest work was to be the Monastery of Santo Antão-o-Novo in Lisbon, work on which, although launched in 1579, only really started in 1613, being finished in 1653. The only part of the church that survived the 1755 earthquake was the remarkable sacristy, which is today a part of the S. José Hospital.

Baltazar Álvares also designed the College of São Bento in Coimbra, started in 1576 and continued by Diogo Marques Lucas in 1603, and the magnificent São Bento da Saúde in Lisbon (1598-1615), which has since been profoundly remodelled and today houses the Portuguese parliament. Sousa Viterbo said about the latter: «such is the architecture, that it seems to be enough to make us believe in such a superb master».

João Antunes and Santa Engrácia

The Church of Santa Engrácia, started in 1681 by João Antunes, who was chosen by the «Irmandade de Cem Fidalgos» (Brotherhood of the Hundred Gentlemen), was mostly constructed by the same architect between 1690 and 1712. It is the point of transition from the Portuguese «Plain style» architecture to the acceptance of Baroque motifs, as well as a monumental and balanced symbiosis of the traditional national form of construction and the spatial and formal innovation achieved at this time.

Its contained, dense space radiates from the centre of a Greek Cross plan, which is rare in Portuguese architecture. The tenseness between the turrets on each of the four corners and the semicircular apses placed between them was solved by linking them up by means of a concavity that can only be seen on the exterior. This gives the building an intense plasticity that sets it in contrast with the rectilinear aridity of the other surfaces.

Santa Engrácia is a white limestone terrace that overlooks the eastern part of Lisbon, face to face with São Vicente de Fora. It is a building of «pure» volume standing on the side of a hill and, due to its originality and size, is the only work of its kind in Portugal. The church is a definite «Baroque landscape» option, which would later be used in the Basilica of Superga in Turin, built by Juvara between 1717 and 1731. But in its overall architectonic expression, this work remains as an act of defiance in the face of the stylistic «new wave» that came from Italy, being based on the traditional, austere «Plain Style» that merely accepted a certain «intrusion» of some undulating Baroque lines. The dome was only completed in 1966, when the church became the national pantheon, being the result of a disputable and disputed revivalist project that followed many different suggestions and designs of the previous decades and were signed by such architects as Raul Lino, Ventura Terra and others.

João Antunes (1643-1712) was an apprentice of the Scholl of Civil Architecture at Paço da Ribeira. He was appointed as architect for the military orders in 1698 and royal architect, in 1699. He designed the Convent of Lourical in 1690, the church of the Convent of Nossa Senhora dos Cardais in Lisbon in 1693 and redesigned the Church of Santos, also in Lisbon, with two new bell-towers in 1696.

Apart from his masterpiece of Santa Engrácia, his other outstanding works include the sacristy of the College of Santo Antão-o-Novo (1696) in Lisbon, where Baltazar Álvares had worked and which is today the chapel of the São José Hospital, the Church of Nossa Senhora do Cardeal in Pombal (1697), the Church of the Order of Santiago da Espada (St. James of the Sword) at Alcácer do Sal (1700), the order of which he was architect, and the Church of Nossa Senhora do Cabo Espichel for the House of the Princes at the sanctuary near Sesimbra (1701). In many of these works he frequently used a «luxurious» interior decoration of stonemasonry and inlay work.

The symmetrical octagonal churches he designed must be referred to — the Noviciate of Nossa Senhora da Nazaré (1705), which is the present-day Hospital of Arroios, in Lisbon, the Church of Senhor da Cruz in Barcelos (1701), which is similar to Santa Engrácia, and the Church of Menino Jesus (1711) in the capital.

The Aqueduct of Águas Livres (Free Waters)

Built to supply Lisbon with drinking water, the aqueduct was a notable undertaking of the reign of King João III and contains equally notable works along the 59 kilometres of its length between Caneças and Lisbon, including well-heads, inspection points, branches, the triumphal arch at Amoreiras, the reservoir of Rato and fountains.

The most spectacular part, however, is that of the arches that span the Alcântara valley to Campolide, which «from the point of view of grandeur, it is not inferior to any aqueduct left by the ancients» (op. cit. Murphy, in *Guide to Portugal*, Lisbon).

The comparison of this work with the known models of Antiquity demonstrates its unusual size: «the most magnificent and most sumptuous undertaking of its kind, including those of the Romans and the French» (op. cit. José Augusto França).

Many people certainly had a hand in its construction, including Manuel da Maia and Custódio Vieira, who erected the arches of Alcântara, Ludovice and Carlos Mardel, who was responsible for the triumphal arch, the Rato reservoir and the fountains. It was built, with the help of a heavy tax, between 1729 and 1748, although some of the branches were only concluded in the 19th century.

The Pombaline «Downtown» and Carlos Mardel

The most notable urban monument and ensemble of the country, the so-called «Downtown» was reconstructed following the almost total destruction of the previous area by the 1755 earthquake. Three military engineers, Manuel da Maia (1698-1768), the «planner», Eugénio dos Santos (1711-1760, the «urbanist», and Carlos Mardel, the «architect» (1695-1763), played a crucial role in its planning.

It is made up of a geometric centre that stretches from Rossio to Praça do Comércio (the former Terreiro do Paço), plus the hillside areas of the Cathedral and Chiado and the port zone of Campo das Cebolas and Cais do Sodré. Expertly conceived in urbanistic

terms, being practical and erudite at the same time, the new «Downtown» maintained its former functional and symbolic «spaces» without losing its sense of perspective and formality, even indicating that it would become the new axis of urban expansion to the northern interior of the city. On an architectonic plane, it resulted in a building system based on a pure and pragmatic «classical» design that was technically prefabricated, anti-seismic and fireproof, the precursor of a preindustrial modernity. In the field of architecture, where Eugénio dos Santos also played his part, the role of Carlos Mardel, who possibly perfected new forms and techniques, must be specially stressed.

Carlos Mardel (1695-1763) was of Hungarian or French origin. He came to Portugal in 1733. He was appointed as architect of the royal palaces of Ribeira, Sintra, Salvaterra and Almeirim and of the Military Orders in 1751. He designed the Royal College of São Paulo in Coimbra in 1751 and, as already mentioned, worked on the Aqueduct of Águas Livres.

Among other works, Sousa Viterbo attributes to him the Palace of Salvaterra, the Convent of São Domingos at Benfica in Lisbon, the College of Nobles (1760), the palace and estate of the Marquis of Pombal at Oeiras and the fountains of Esperança and Formosa Street in Lisbon (besides the one of Rato). He also made the original plans for the Palace of Lázaro Leitão at Junqueira in Lisbon in 1734.

In Oeiras, Junqueira and Rossio, Mardel seems to have perfected the system of sloping roofs known as the «Pombaline roof», in which the two sides are of different inclinations, thus combining the central European forms in symbiosis with the traditional slightly curved Portuguese roof.

José Augusto França, who confers more merit on Eugénio dos Santos, because of his «classic modernity», than on Mardel, who he thought was bound to his «Rocaille» inheritance, refers to other works that the latter may have executed during his «Joanine» period, which continued up to 1750. Almost all of them are linked to the vocation that Mardel demonstrated for secular and public works and infrastructures, such as the transformations carried out in the Mitra Palace in Xabregas, the «House of Verandahs» alongside the House of the Pointed Stones in Lisbon, his (only) church, of São João Nepomuceno, built in 1737 and since demolished, the Quay of Stone and the reconstruction of the town of Ourém.

Clérigos and Nicolau Nasoni

«The Clérigos Tower is Oporto compressed upward» were the words that Teixeira de Pascoais used to poetically define the monument that even today is the *ex libris* of the city (op. cit. *Guia de Portugal*).

The master-piece of both Nasoni and of northern Baroque religious architecture, the ensemble of the church, house and tower of Clérigos was started in 1732, the tower being begun in 1748 (or 1754?) and finished in 1763. Nasoni had a perfect understanding of the urban and architectonic traditions of the «Invincible City» with its traditional profile of churches strung out along its hillsides and defining its overall outline and with the typical «slender, tall» facades of the houses that filled the deep, narrow spaces of Gothic tradition.

The architect achieved a remarkable symbiosis of all these disparate values of the city environment in his work. The excessive slenderness of the tower stands out from and corresponds to the rest of the ensemble owing to the neutrality and the length of the main body of the church between the facade and the tower. Besides this, and in a very Baroque attitude, everything is exacerbated by the use of granite, which lends it an imaginary (and extraordinary) lightness and elegance.

«Os Clérigos», as the whole ensemble is known, has become a «rockface» where climbers can show off their prowess, as if it were a «natural» structure of organic existence, «welded» into the form and history of the city itself, from which it has become indissociable.

Nicolau Nasoni (1691-1773) was born in Italy and learned his trade in Sienna. He worked as a decorative painter in his homeland. He arrived in Oporto in 1725, where he mainly worked in churches. He spent until 1731 painting the chancel of the Cathedral, where he also built the lateral galilee in 1736.

Gradually identifying himself with the northern and Portuguese traditions of construction he modernised and innovated it with works of a profound originality, mostly erected in Oporto and its suburbs. In the city he built the Church of Senhor de Matosinhos in 1743, the Church of Misericórdia in 1749, where the «graphic» feeling of the facade superbly enhances the «restricted» location in the narrow streets of the old part of the city, the vast Episcopal Palace in 1734 and the famous «Freixo Palace» on the banks of the Douro around 1750, conceived with a composite «Rocaille» freedom that almost makes it a precursor of Art Nouveau.

The great order of the late sixteenth and seventeenth centuries was unquestionably that of the Jesuits. They arrived in Portugal in 1540. They were 650 by the middle of the century. They owned a university and several important colleges. Their priests swarmed throughout Portugal and overseas and were among the most popular of all. Their main target was the youth, and in Portugal they almost succeeded in monopolizing regular teaching. For almost a century they were good allies of the Inquisition and the secular clergy. Things started changing little by little as their power and wealth increased. After the 1620's a hidden struggle opposed Jesuits and Inquisition. They chose the cause of independence and were among the chief supporters of John IV.

Yet neither Protestants nor Jews posed any serious menace to the religious unity of the country. Consequently the Portuguese Inquisition had to find a permanent target in order to justify its own existence. The New Christians were sufficiently numerous to provide a good one. By discriminating against them and accusing them of Judaism, the Inquisition created a true *ghetto* and kept it alive, instead of extinguishing it. The New Christians formed, in the main, a middle class of merchants and capitalists, and they were not well accepted by the small «Old Christian» Portuguese bourgeoisie, or by the feudal nobility, neither by the poorer masses which saw in them the heirs of the much-hated Jew usurers. A true state within the state, the Inquisition burned, from 1543 to 1684 at least 1,379 people at the *autos da fé* («acts of the faith»), an average of almost ten a year. The total number of condemnations rose to a minimum of 19,247 in the same period, more than 136 each year. Hundreds of people, of course, died in prison, where they were often kept indefinitely without trial.

The expansion of long-distance trade favoured the growth of a Portuguese merchant class, which in the mid-1500's had probably reached its peak. But the foreign traders came to Portugal in larger and larger numbers, attracted by the good profits and the royal privileges. The most profitable undertakings always belonged to the Crown, the nobles, or the foreigners. The Portuguese funded little and were not used to reinvest at a rapid pace. They got no help from the state, and the numerous petty bourgeois were another obstacle. They were afraid of powerful trusts or big companies which might absorb or destroy them.

The dual union with Spain was favorable to a Portuguese bourgeoisie. The Madrid government was much more conscious of the importance of a middle class in the structure of the realm. The New Christians enjoyed some periods of ease and prosperity. But the revolution of 1640 brought about a period of decline for the Portuguese bourgeoisie. A good many foreigners settled down in Lisbon. They inflicted the Portuguese traders a deadly blow. The Inquisition acted freely and ruined a large number of firms and individual businessmen, preventing the joint initiatives of Portuguese living in Portugal and Portuguese exiles abroad.

Artisans of most crafts remained gathered together in the corporations and so they were kept firmly «in their place». In *cortes*, many of the people's deputies belonged to the nobility. In the municipal government of Lisbon most of the important administrative jobs were reserved to aristocrats.

The number of slaves declined. At the same time, their process of integration speeded up, mostly through miscegenation. Several royal decrees forbade or made difficult the importation of slaves to Portugal, particularly from Índia. Despite all this, a few thousand still lived in Portugal by the middle of the seventeenth century.

In the late sixteenth and seventeenth centuries government by councils developed, small bodies of people, chosen from the ranks of the nobility, the clergy, and the bureaucrats. They advised the king and his ministers on affairs of importance. Later on, after the restoration of independence, they limited and controlled royal power, often seizing power themselves. From 1662 to 1667, the *escrivão da puridade* was revived by the Count of Castelo Melhor as a true prime minister, an intermediary between king and secretaries. The role of the *cortes* very much declined in favour of royal centralization. After the Restoration their role was for a while somewhat enhanced, but afterwards the agony came.

The University became a state institution under the jurisdiction of the royal tribunal known as *Mesa da Consciência e Ordens*. The Coimbra monopoly in university courses was threatened by the Jesuits, who founded at Évora a new university. They obtained too that admission into the *Faculdades* of Canons and Law should depend on a degree by the College of Arts, which they directed. Jesuits, Inquisition, and Crown were at that time strongly united against heresy, cultural bourgeoning, and deviations from the Council of Trent policy.

The Arab-influenced Manueline vestiges of the former monastery may have inspired the imaginative and «free» reconstruction of stylistic compulsion, which resulted in an amalgam of neo-Manueline, neo-Gothic, neo-Arab and oriental motifs.

The first works began in 1839 and continued until 1849. A grandiose circular tower was erected in 1841 and the following year galleries of Gothic arches and a tower topped by a «minaret» were added. The portico with a drawbridge was built in 1843, followed in 1844 by the porticos of «the creation of the world» and «the Tritan», of Arab and Granadine reminiscences respectively.

Work was resumed in 1868 and went on until King Ferdinand's death in 1885. The final result is an ensemble unbalanced in detail, with a certain organic structure and a spectacular landscaped dimension. On visiting the palace in 1842, a certain Romantic author wrote: «There are castles of kings and princes along the Rhine and in the Bavarian Alps [...] but how poor and imperfect they will appear in their ornamentation if we compare them to the delicate tracery and fantastic arabesques that are to be found in Pena [...] its pure white blending perfectly with the dark blue of the southern sky and producing the same impression as the Arab dreams and songs.» (Lichnowski, quoted by J.-A. França).

The «Portugal Salon» and José Luís Monteiro

A grandiose metal structure of the so-called «architecture of iron» of the second half of the 19th century, the «Portugal Salon» was built by José Luís Monteiro in 1898 as a part of the programme that commemorated the 4th centenary of Vasco da Gama's arrival in Índia.

A member of the Executive Committee, Monteiro, was entrusted with the task of planning the premises for the administrative services, the museum and the library of the Geographic Society. He erected superimposed iron galleries (then in fashion in Europe) supported on pillars, with stairs at each end of the rectangular salon thus creating a vast central space on the upper floor of the Coliseu dos Recreios.

A global, multi-purpose space with overhead lighting that makes it lighter and more elegant, it is a good example of spatial vision

and modern technology of the end of the 19th century that follows the practical and functional «international style» that was in fashion at the time.

José Luís Monteiro (1848-1942) was born in Lisbon of a family of stone-masons from the suburbs of the capital. A delicate and notable drawer, he studied at the School of Fine Arts and in Paris with a scholarship from 1873 to 1878. Employed by the Lisbon City Council from 1880, he was a part of the team that assisted Frederico Ressano Garcia in his planning of the new areas of the city at the turn of the century. He was appointed professor of Architecture at the Lisbon School of Fine Arts in 1881, a post that he held for many years.

He devoted his time to the planning of urban public works while in the service of the Lisbon Council. His most important works were the Market of Avenida da Liberdade (1880?), which did not go beyond the planning stage, the neo-Manueline railway station of Rossio (1886-1887) and the adjoining Avenida Palace Hotel in classic French style (1890-1892), the fire-station in Avenida Dom Carlos (1891), the Church of Anjos (1897-1910) and the delicate wooden Froebel nursery school in the Estrela garden.

Monteiro executed several privately-ordered housing projects, namely «chalets» in the suburbs of Lisbon. These included the Biester chalet at Sintra, those of the Counts of Tomar at Cruz Quebrada and the Count of Castro Guimarães at Torel, Lisbon, and the one of the Countess of Cuba at Paço d'Arcos. He also constructed the magnificent house on the Santos Jorge Estate at Rio Frio around 1918.

The House in Rua Alexandre Herculano and Ventura Terra

No. 57, Rua Alexandre Herculano, where its author Ventura Terra lived, is located in the area known as the Lisbon Avenues, which were adapted on the model of the 19th century, Parisian, bourgeoisie «boulevard».

It won the Valmor Prize, awarded to distinguish the owners and architects of the best buildings constructed in Lisbon, in 1903 and is probably Terra's best work in the field of domestic architecture.

The building defines the architect's true style, which can be recognised through certain characteristics of expression and detail: a clear composition and decorative simplicity, which went against the eclectic excesses that reigned in the architecture of the time, on a clearly outlined facade in white stone; slender, elegant windows, with the shutters that Terra almost always used and assymmetrically placed, which seemingly presages the compositional irreverence of Art Nouveau; and an entrance at ground level, without steps, discreet and not aligned with the vertical axis of the house, a principle defined by the existence of balconies, and leading into a corridor that gave access to the main rooms, which were at the front and the back of the house, thus letting in a lot of light. A frieze of Art Nouveau glazed tiles just below the cornice frames the whole building in a colourful finish.

It is this decorative, geometric simplification that is to be seen in works of austerity that may be called, with a certain propriety, «Art Nouveau Lisboa», even though it shows evidence of distinct French influence.

Ventura Terra (1866-1919) was born at Seixas in the northern province of Minho. He was a talented architect who, through force of circumstances, achieved rapid success. He entered the Oporto School of Fine Arts in 1881 and then went on to the Beaux Arts de Paris. In 1886, he started working in the «atelier» of Victor Laloux.

A brilliant and distinguished student, he returned to Portugal in 1896. He was immediately entrusted with the remodelling of the vast building of the Cortes (Parliament) of São Bento in Lisbon, the former convent where Baltazar Álvares had worked 300 years before, a task he carried out following reliable classic lines.

Working mainly in Lisbon, Terra was the architect that, because of the generation he belonged to (the internationalist 1870's, prior to the British ultimatum), his training (Paris) and the work he did (his taste for the cosmopolitan, urban programmes), could be classified as the opposite of Raul Lino, as we shall see.

He built some notable houses in the capital, some of which were awarded prizes, namely those of 25, Rua de Alexandre Herculano, Valmor Prize, 1911, the Palace of Viscountess of Valmor, in the Avenida da República, 1906, and nos. 18-20, Rua do Marquês de Fronteira, 1909.

He was also the author of several public works that were characteristic at the end of the monarchy beginning of the republic, using

a proto-functionalism that made use of the «architecture of iron». These were the Camões and Pedro Nunes High Schools (1907 and 1908 respectively), Politeama theatre/cinema (1913) and the Lisboa & Açores Bank in the Downtown (1906). He died prematurely and accidentally in 1919.

The «Casa do Cipreste» and Raul Lino

With this, his own house, built at São Pedro de Sintra in 1912, Lino technologically, architectonically and graphically approached what could have been termed an «Art Nouveau» of Portuguese roots. He even designed and «manufactured» an improved roof tile of traditional lines with mass production in mind — a mythical and symbolic approximation of the industrial ideal of Morris and Ruskin.

In the building of «Cipreste» Raul Lino carried out a «telluric» recovery of the uneven ground of a former quarry. And believing that each house should possess its «own soul», created a unique overall atmosphere of late Romantic, or maybe even trans-Romantic, taste.

Landscaped to face the Sintra Range and its palaces, «Cipreste» conceals a curved corridor in its interior that is the fulcral point of its lay-out. It begins in a cloister-like courtyard, which is separated from the road by a simple wall, and ends in an atrium lined with glazed tiles that contain a «touch» of Jugendstil. It is illuminated by a glass wall that affords a view of an exuberant garden in the foreground and the Sintra range in the background.

Born in Lisbon, Raul Lino (1879-1974) was a unique personality of the Portuguese artistic scene in which he articulated the Portuguese traditions with the innovative European currents at the beginning of the 20th century.

But, as the author of an extensive theoretical work, he at the same time defended certain doctrines regarding the concept of domestic architecture of a rural, Romantic physiognomy that was a little out of date at his time. And as held official posts, he was responsible for the very conservative, or even reactionary, orientation of Portuguese architecture between 1930 and 1950.

Cultured and enlightened, Lino always cultivated a certain intimacy with other arts such as music, literature and theatre, thus

widening his contacts to environments beyond the world of architecture. His Anglo-Saxonic (Windsor, 1890) and Germanic (he studied with Albrecht Haupt in Hannover from 1893 to 1897) education of his youth was reflected in the spiritualist and deeply cultured vision of his work.

After travelling in Morocco (1898-1901), where he was very impressed by the traditional Muslim construction, he designed a series of villas in Arab and southern taste (Monsalvat, 1901, Silva Gomes, 1902, O'Neill, 1902, «Vila Tãnger», 1903, all in Estoril), in which he included courtyards, porches and balconies.

In the urban projects carried out in Lisbon he was correct but not very innovative. The house in Av. Fontes Pereira de Melo (1906, but since demolished), the house of Elisa Vaz in the Av. da República (1912, also demolished) and António Sérgio's house in Lapa (1925), were his most outstanding works in the field of housing. He was also responsible for public works and shops, such as the Tivoli cinema in 1924 and the «Gardénia» shop in Chiado.

With the advent of modernism in the 30's, his style became austere and dry. The «Loja das Meias» in Rossio (1938) and his own house in Rua de Feio Terenas (1939) are examples of this.

Then came a long period of much theoretical and little practical output and he became more and more out of date in a world which, according to him, «architecture has died».

The Eden Theatre and Cassiano Branco

The most significant work undertaken when modernist architecture appeared in Portugal at the end of the 20's was that of the Eden cinema/theatre in Restauradores Square in Lisbon.

Cassiano Branco's first project in 1929, a graphic and highly inconsistent «Art Deco» design, seemed to be nothing more than a reconstruction of the already existing building which had become obsolete owing to the new regulations that governed auditoria. He then introduced a second project in 1930 that was based more on local traditions and containing traces of heavy, «powerful» «Decorative Arts», where one can already see the desire for a monumental building that would be achieved with the master-piece that was produced by the third and final project of 1931.

This final project brought forth a work that had been freed from all stylistic and decorative fetters and which was transported to a clearly futurist scale and aestheticism that was reminiscent of the Sant Elia «factories». It is a work of stone, glass and light, rising like an alien in the urban ensemble of the square, with enormous, transparent, vertical fillets from the top to the bottom of the building and crowned by luminous pyramids that seem to predict the new cosmopolitan and night-life of the city.

Falling out with his client, Branco was replaced by Carlos Dias, who adapted and «reduced» the plan to the edifice that was finally erected in 1933. Even so, it is still a remarkable building, above all in the two parts of the 1931 project that were left untouched, the foyer with its crossed winding staircases, seemingly suspended in mid-air, and the overhanging vertical gables on the lateral facades in iron and glass.

Cassiano Branco (1898-1969) was maybe the most outstanding architect of the so-called «first Modernism» in Portuguese architecture from 1925 to 1940. He took his degree at the Lisbon School of Fine Arts in 1926 and it was in the same city that he executed his best «art deco» work — the Eden cinema — and his most imaginative within the purist and abstract lines of a more radical modernism — the Victória Hotel in the Avenida da Liberdade in 1934. He also participated in the project for the Coliseu in Rua de Passos Manuel in Oporto, another of the great modernist works of the country, where Júlio de Brito and Mário de Abreu also worked in 1939.

Possessing a powerful and conflicting personality, he was active in left-wing politics from an early age, which condemned him to a certain isolation in regard to the Salazar regime and in his professional life. This resulted in him receiving hardly any work from the state in the 30's, at a time when his colleagues of his generation frequently did so, which led him to accept numerous orders from the private sector in Lisbon, in the housing programmes for the city's new residential areas.

He designed his buildings along conventional lines and with inventive facades (179-A, Rua do Salitre, in 1934, 44-48, Avenida de Álvares Cabral in 1936, 3-9A, Rua Nova de São Mamede in 1937, 27, Avenida dos Defensores de Chaves in 1937), using to the full the plasticity of the symmetrical balconies and the geometric volumes.

He also designed urban villas of a purist expression but of lively spatial motion (nos. 10, 14, 16, 24, Avenida de António José de Almeida in 1933 and 87, Avenida de Columbano Bordalo Pinheiro, built in 1937 but since demolished). He also planned the mirror-lined Café Cristal, 131, Avenida da Liberdade, which was constructed between 1940-1942 but has also been demolished.

He was a man with a broad and daring mind and some of his projects were way beyond the restricted investment possibilities of the time. A «Portuguese Film City» at Cascais and a large-scale «Seaside City» to be erected at Costa da Caparica, both planned in 1930, never left the drawing board. He imagined and designed a remarkable bridge over the Tagus in 1958, thus anticipating the one that was built shortly after.

At the end of the 30's, he ironically and unexpectedly turned to using a revivalist language that was so much to the official taste and which was taking shape at the beginning of the 2nd World War as part of an international conservative trend. He first «played» at laying out a didactic children's park, the «Children's Portugal» at Coimbra in 1937-1944, and the Hotel do Luso and its diversions in 1938. He then executed more «serious» works in Lisbon, such as the «Império» cinema in 1948 and a building in Praça (Square) de Londres in 1951. He designed bridges and dams in the field of infrastructures and undertook public works in Angola.

The Bank in Vila do Conde and Siza Vieira

One of the most outstanding of Siza Vieira's many works, the Banco Borges & Irmão building manages to transfigure the local division of land and the proportion of the traditional buildings with an enormous impact of plasticity and poetic motion.

Like a UFO that has landed in Vila do Conde, on a normal plot of «narrow, deep-set» land, the unitary volume conjugates the prismatic and cylindrical forms with a remarkable simplicity and lightness that is even more enhanced by the white exterior and by the use of clear, veined marble.

With a small high-tech «touch» provided by the visible mechanism of the lift at the back of the building and the wise and controlled use of detail and «clean, solid» materials, it is one of the most notable

works of this architect in his return to the modernism of the 20's and 30's. It was planned and built between 1978 and 1986 and was awarded the National Prize for Architecture of the Association of Portuguese Architects — Crédito Predial Português in 1987.

Born in 1933, Álvaro Siza Vieira is the most notable and well-known of living Portuguese architects.

Initially taking up sculpture, he studied architecture at the Oporto School of Fine Arts. He worked with Fernando Távora from 1958 to 1960, although his first project, a group of villas at 354, Rua de Afonso Henriques in Matosinhos was executed between 1954 and 1957.

It can be said that there was a first phase of his work, linked to the organic movement of Alvar Aalto, in the 50's and 60's with notable works like the restaurant of Boa Nova at Leça de Palmeira (1958) and the swimming-pool, also at Leça (1961-66), of «uncurbed» geometrical lines. Then comes a phase of «dryness» in the 60's and 70's, with the use of material that seems to be reinforced concrete, such as the house in Avenida dos Combatentes in Oporto and Alcino Cardoso's house at Moledo do Minho between 1971 and 1974. This is followed by a period of progressively more complex and purist lines, as in the bank at Oliveira de Azeméis from 1971-1974 and the Beires house at Póvoa de Varzim from 1973-1976.

With the political transformations of 1974, he dedicated himself more to social programmes, using a simple, modular, neo-rationalist design, as in the collective housing schemes at São Vítor in Oporto (1974-1977), at Bouça, also Oporto (1973-1977) and at Évora, Malagueira (1977).

After executing many works abroad during the 80's, such as the building in Kreuzberg, Berlin, the plan for a casino in Salzburg in 1987, apartments in Schilderswijk, The Hague in 1987-89 and a plan for Macau in 1984, Siza was finally recognised in his own country as the great artist that he is and he began receiving important orders. These include the new Faculty of Architecture of Oporto (1985), a school at Setúbal, which is at present under construction and, above all, the plan for the reconstruction of the Chiado area in Lisbon that was destroyed by fire in 1988.

At the same time, Siza continues to execute «small works» with a great sense of space and fluent compositional freedom, as in the house in Ovar (1980-84), which is reminiscent of Adolf Loos.

Siza was awarded the Alvar Aalto international prize in 1988.

5.

POPULAR ARCHITECTURE: A REGIONAL AND TRADITIONAL VIEW OF THE PORTUGUESE ENVIRONMENT

Contents, Methods, Concepts

The approach to popular, also known as «vernacular» or «regional», architecture establishes the essential relationships between human needs and the environment in which the human being lives.

These relationships can be placed in three different groups:

a) The constructed occupation of the «land», in which it is possible to study the types of settlement, the rural or urban structures elaborated or the «fabric» of the construction on a macro-scale. The small «individual» elements of the rural or urban environment such as bushes and walls, bridges and paths, furniture and graphics can also be included under this heading;

b) The house, or habitation, an organism to be related to external elements, such as other habitations areas of production, public spaces, and internal elements like the link between storage space — living space, bedroom — kitchen, house — supplementary buildings. Types of houses, including morphological analysis of roofs, facades and other details, and/or spatial analysis in relation to the division or functionalism of the house can be included in this group;

c) The architecture that is complementary to the first two, connected to means of production such as storehouses and granaries (the outhouses of the habitation, the buildings linked to the working of the land and those connected to the use of primary sources of energy). These can be classified as architecture «of bread» (granaries, mills), «of fishing» (boathouses), «of cattle» (animal-traction mill, haylofts), «of wine» (cellars, presses), «of water» (springs, wells) and «of craftsmen» (potteries, blacksmitheries).

Human and physical geography, from Vidal de la Blanche and with the contribution of Orlando Ribeiro in Portugal, and anthropology, with C. Levi Strauss and Amos Rapoport, and in Portugal with the pioneering works of J. Leite Vasconcelos and Leite de Ataíde followed by those of E. Veiga de Oliveira and Fernando Galhano, have been the most important and «founding» sciences that have given the study of Popular Architecture a scientific character.

Through monographic or multi-disciplinary studies that were undertaken by Raul Lino in the 20's and 30's and by the National Union of Architects in the 50's and 60's, Architecture and History, through the works of Mário T. Chicó and Pais da Silva, have gone hand in hand and at times have, as in the case of architecture, been of prime importance in an effort to carry out objective studies.

Starting off from a 19th century tradition that was based on «determinist» interpretations, in which the environment totally conditioned man's actions, i. e. the type of settlement or house, the theses then evolved to a more «functional» reading in which a more technical, detailed and active view of the environment became all-important. Finally, the «cultural» or «anthropological» interpretations, while continuing to accept environmental influences and circumstances and functional needs, lay stress on the communities cultural traditions, which constitute a «permanent background» for the people's adaptive capacities.

Descriptions and Interpretations

Defined through opposition and complementarity, popular architecture will refer here to a predominantly «Rural» environment and separated from the «erudite» influence, which has its own rules and specific chronology, although it is difficult to define a clear boundary between the two in Portugal in many cases. The urban environment, which is determined by more evolutive and datable rules, will be dealt with in the chapter entitled «The House in Portugal».

Using his studies of history and geography as his props, Orlando Ribeiro was the first person to make an overall classification of the models of occupation to be found in Portugal. He referred to the typical «granite civilization» of the north, articulated with the mor-

phological, climatic and agropastoral harshness of the region and with a territorial occupation that oscilated from the agglomeration of the Trás-os-Montes to the total dispersion of the Minho. The civilization of the southern plains to the south of the river Tagus (Alentejo), a region that possesses a luminosity that is linked to the «soft» materials that are fired and whitewashed, in keeping with an open-air life that is closer to the soil, organised in concentrated and inter-linked settlements, he called the «clay civilization».

This reading refers to two big geo-climatic regions, that of the «Atlantic» (granite) and that of the Mediterranean (clay). They are also two separate historico-cultural regions, the celtic-suevi «Christian» and the Romanized and Mozarab. More detailed readings make all this much more complete and much more complex.

1 — The existence of a third geo-climatic area, the «Interior».

2 — The greater variety of building materials used, such as schist in both the north and the south and wood for the houses called «paleiros» in the coastal areas.

3 — Archaeological data that refer to possible ancestral models. Leite de Vasconcelos even mentioned a very ancient «palafitte culture» with houses built on wooden piles above the damp, swampy soil in the north, possibly forerunners of the present-day haylofts. Veiga de Oliveira studied the pre-historic «round houses» that appear both in the Alentejo (Castro Verde) and in pre-Roman fortified settlements (castra) in the Minho.

Popular Architecture in the Regions of «European Portugal»

With the «Survey of Popular Architecture» that was carried out by itinerant teams of architects working with standardised criteria between 1956 and 1961, the knowledge of the sub-regions of popular architecture in Portugal was much improved. From the end of last century until then, this knowledge had been confined to a romantic view that was tied to the notion, defended by Raul Lino, that there was just one type of «Portuguese House». Basing the survey on the recent thesis of Orlando Ribeiro, the result stressed the relations of the cultural and functional context, comparing the northern and interior areas with the respective neighbouring regions of Galicia and

the Spanish meseta and the southern areas with Andalusia and the Spanish Estremadura.

The «Survey» thus looked at things from an international point of view rather than a «Portuguese» view of the regional architecture, as the latter could have degenerated into support for the official nationalist ideologies that the cultural vanguard of the time wished to combat.

It became clear that Portuguese vernacular architecture fitted into the framework of that of the southern countries of the geo-cultural Mediterranean area, although it was the «outer edge of the world» in relation to them. Building materials extracted from the earth, such as stone and clay, and low buildings with slightly inclined roofs had been the norm for centuries, although there had always been a parallel penetration of both influences that were seemingly «Oriental» and labelled as Islamic taste and others supposedly «Nordic», which were the higher buildings with a wooden framework, especially in an urban context.

By dividing the country in «zones» it was possible to characterise a series of different types of houses:

1. In the north-west, which is characterised by a dispersed occupation, the houses are of granite, constructed on the sides of hills, which are used to create intermediary floors, the ground floor is to house the animals, they have a wide wooden verandah, a tile roof and a stone maize-loft as a kind of outhouse, of which there are many owing to the endemic micro-property-owning society;

2. In the northeast hinterland, an area of isolated villages, the houses are simpler and built in granite or schist, have two floors, no exterior facing and a simple kitchen with no chimney, transmitting a feeling of the «open» or community life that is common in the area;

3. In the central interior (the Beiras), the houses are also built in stone, have a roof of ridged tiles, two floors, the lower one being for the animals and farm implements, a wooden porch and an exterior stairway that is sometimes closed with glass as protection against the bitter winds;

4. An enormous variety of materials, techniques and models are to be found in the central coastal strip that stretches from Aveiro to Setúbal. They include the «palheiro» type of house, completely built of wood, that is to be found in the dunes of Mira, the house of adobe or cob of Gandara, plastered, having one floor and with the kitchen

and outhouses separated from the main house and forming an imperfect courtyard, and the house of the «saloio» region of Sintra, Cascais, Loures and Almada, built of limestone, plastered and whitewashed, cubic, having two floors, with the kitchen on the lower, and an interior or exterior stairway.

5. In the south, in the province of Alentejo, is the «monte», a descendant of the Roman villa, or the houses of the villages, whitewashed, with one floor, a big chimney surmounting the facade, small doors and windows, worked eaves, coloured outlines around the doors, windows and the base of the house, an oven that is either attached to the house or separated and separate buildings for the animals.

6. Finally, the house of the coastal strip of the southernmost province, Algarve, is a single-storey, whitewashed building with certain refined details, smaller chimneys, coloured outlines and platbands. A part of the roof is a terrace, supported by a small vaulting in brick. The oven is attached to the outhouses. In the interior, or mountain area, the houses have either one-sided sloping roof or a hipped roof similar to those found in urban suburbs, which Orlando Ribeiro studied in detail.

Other Areas:

Popular Construction and the Diaspora

From the 15th century, a process of miscegenation with African traditions and an adaptation to the local volcanic materials and the seismic phenomena began in popular architecture in the Atlantic archipelagos, which led to the evolution of renovated models. The architecture of the islands is the result of settlers of various origins, a slow, secular local evolution that was isolated from its origins but which at times suffered sudden influences, namely Flemish and Brazilian. A recent study (Popular Architecture of the Azores, 1982-85, for the Association of Portuguese Architects) pointed out the importance of the rooted cultural traditions of the «travelling» communities.

It was thus that these traditions, coming from geographical areas that were distant and of a completely different spatial and constructional environment, were not lost. They were adapted to the distinct

functional situations and sometimes a little irrationally, simply because the newcomers insisted on «doing it as we know best», thus resisting any change.

In Madeira, a clear transposition of architectonic models of the Lisbon area (Columbus's house on Porto Santo) and the Minho area can be noted. The presence of several types of thatched roofs (Santana) must be mentioned. Chimneys are not very common and the house is fragmented into several separate bodies, like the houses at Caniçal, for instance, that have «separated kitchens». The dominant type of house is rectangular, small single-storeyed and with a sloping four-sided roof, which seems to be a descendant of the former thatch roofing (see Orlando Ribeiro).

There is an immense diversity of houses in the Azores. In general the houses are built of stone, although each island has its own characteristics: whitewashed, single-storeyed and with a «terrace», an apse-like oven and chimney on Santa Maria; a window-door-window pattern, colourful and with innumerable sub-variants on São Miguel; refined designs in the basalt-framed doors and windows on Terceira and Graciosa; rough two-storey houses, with inside oven and no chimney, forming a whole with cisterns and cereal-lofts, on Faial and Pico; elongated, single-storeyed and colourful with whitewashed stripes on Flores; severe, black, two-storeyed, with a place for the animals and implements and the kitchen on the ground floor, on the isolated Corvo. The original Flemish-style windmills (see Veiga de Oliveira) and the polychrome «Imperios» (a kind of «chapel» for the cult of the Holy Ghost) of Terceira, of unknown origin, must also be mentioned.

In the Canaries, where for centuries the second most important community was the Portuguese one, there appears a curious fusion of Portuguese vernacular influence, mainly from Madeira and Azores, with the Andalucian type of house, with its patio, «distiladera» (a small cistern) and balconies. This influence was very strong, above all as far as morphology was concerned (roofs and eaves, door and window frames, modular construction) and is mainly to be seen on the islands of La Palma, Tenerife and Lanzarote.

A «dialogue» took place in the Cape Verde Islands between the rectangular European house with the window-door-window pattern and a two-or four-sided sloping roof and the circular African-style abode.

This vernacular tradition would extend to the African mainland, Brazil and India, each with its respective sphere of influence. In

regions that possessed their own culture and characteristics, these influences created an inevitable phenomenon due to the distance that separated them from their Portuguese genesis, although they never really lost touch with their origins. Among the innumerable examples of the Portuguese vernacular influence in nucleus of colonization, the following places can be mentioned as they still contain significant vestiges, mainly in urban rather than in dispersed constructions, obviously due to the type of occupation undertaken:

— On the African coast, the island of Goreia, in present-day Senegal, the settlement of Cacheu (Guinea-Bissau), the old constructions of Luanda (Angola) and the famous island of Mozambique;

— On the South American coast, Olinda/Recife, in Pernambuco, the so-called «big houses» of Recôncavo da Bahia, rural agglomerates on the sugar-cane plantations, the city of Salvador and its surrounding towns of Cachoeira and Itaparica, Alcântara do Maranhão, Parati near Rio de Janeiro, and many others. The typical whitewashed houses with the window-door-window pattern, the doors and windows outlined in bright colours, eaves and characteristic roofs can be seen in all these places. In Brazil, mention must also be made of the mining towns of Ouro Preto and Mariana, of the hinterland (Goiás, founded at the time of Pombal) and the south (Laguna in Santa Catarina, a state populated by Azoreans in the 18th century), where popular architecture has certain aspects that are identical to those mentioned above. Even farther south (in Uruguay, the old fortified town of Sacramento is the southernmost example of these constructions;

— On the coast of India, popular and manorial houses, with strong local influence in symbiosis with Portuguese physiognomy, can be seen all over Goa, the most outstanding being the ones in the suburbs in Mapuçá (Bardez) and Margão (Salcete). A significant architecture of this type is also to be found in Daman and Diu.

As examples, some definite characteristics of this architecture can be stressed in more detail;

— As far as construction is concerned, the large number of houses to be found in Ouro Preto and other towns of Minas Gerais that have a wooden framework naively imitating the 18th century stone manor houses of northern Portugal;

— The L-shaped house with a lean-to kitchen and trellised semi-courtyard of Maranhão, similar to the Minho manor house;

— The triple eaves of the houses in Margão, which are a very peculiar Hindu interpretation of Portuguese roofs. This Goan city

possesses a remarkable series of whitewashed houses that contain a strong Mediterranean taste;

— The «karepas» of some old houses in Macao, mother-of-pearl slats that replace the traditional wooden blinds at the windows and which are possibly of a «second-hand» influence of a Goan tradition.

Both these detailed and general aspects enable us to relate the vernacular constructions of the colonised lands with their Portuguese origins.

Today, Clandestine Building and the Emigrants

The environment of mainland Portugal described above has been profoundly modified in the last few decades, as a result of both the tremendous impetus of urbanization that has taken place, which has put an end to the traditional isolation and given rise to new types of houses, and new building materials and technologies. Emigration to other European countries in the 60's and 70's and the extensive clandestine occupation in the suburbs of the biggest cities have radically — and at times brutally — modified the colours, models and even the landscape itself in the hinterland.

The initial cultural reaction of rejecting these new values, which was motivated by the abrupt cut with tradition, has been gradually replaced by an interest in trying to understand the causes and characteristics of the changes. The situation may be analysed from three points of view — the urbanistic (plans for clandestine plots of land, intervention of the local authorities), the sociological (the socio-cultural reasons for the types of houses built by returned emigrants) and architectonic (the classification of the new types of regional-emigrant house and their possible aesthetic improvement).

6.

THE HOUSE IN PORTUGAL: A REVUE OF THE EVOLUTION OF HOUSING

The theme of the family house, or the space of «domestic» habitation, is one of the crucial points that characterize an already-molded culture, because it is within this space that the expression «intimate» and the real understanding of that space on the part of the community is concentrated and confirmed, i. e. how that community feels that this space should be used.

It is probably here that the traditional characteristics and roots of Portuguese architecture are to be found rather than in looking at architecture from other points of view or through stylistic analysis of the so-called erudite architecture. This is especially true if we have in mind, as has already been mentioned, that these characteristics are strengthened by the preference for elementary volumes and simplified plastic expressions, i. e. in a certain way against a respective «complex» and «erudite» understanding of construction.

Besides the archaeologically-based research on the pre-Roman and Roman periods carried out in the last few decades by ethnologists and historians like Veiga de Oliveira and Jorge de Alarcão, who pointed out the importance of the circular and rectangular houses in the definition of the first fortified settlements (V. Oliveira) and the features of the urban house in some Romanised settlements in Portugal (J. Alarcão), reference must also be made to the first field workers who used photography and drawings at the end of the 19th century (Rocha Peixoto, Leite de Vasconcelos) in the study of this subject and, at the same time and in the 20's and 30's of this century, the research and theory of Raul Lino. The cultural tendency launched by the works of these last-named authors was dubbed as the «Portuguese House» and was the feature of the first quarter of the 20th century. It assumed an ideological character of nationalist

leaning in an ahistorical search for «regional types» of traditional houses in the country.

Other more up-to-date theses mainly concentrated on the types of rural house (Survey of the Union of Architects) or the erudite house (Carlos Azevedo), so they are referred to in their respective chapters.

Through still-existent specimens and owing to the lack of documents, it is only possible to get an idea of the typological evolution of the urban house from the end of the Middle Ages (14th-15th centuries). The most important contributions in this field continue to be those of Veiga de Oliveira and his team in regard to the traditional northern house that was later transposed to Brazil and, shorn of its ideological content, the theories of Raul Lino, who carried out a tentative analysis of the overall evolution of «domestic architecture».

Taking all this into account and starting with a systematic analysis of the organization of the interior volumes and the structure of houses, an attempt can be made to enumerate a series of domestic and habitational architectural typologies in Portugal. The main focus here will be on current urban architecture of a vernacular expression, as rural environment was dealt with in more detail in the chapter on «Popular Architecture» and erudite production in other chapters. In this context, the various structural, spatial and morphological aspects that involve the definition of typologies and their temporal evolution will be dealt with.

From the Medieval Inheritance to the Post-Renaissance Models

The first thing that must be done is to establish a typological and constructive relationship between the Roman «villae» and «insulae» in the Peninsula, pre-Roman habitation and the medieval types that appear later.

The vestiges of medieval houses existent in Portugal can be mainly grouped in two types of construction — the building with «overhanging storeys» and the one with «sharply-slanting roofs» without being sure of their origin, it may be possible to place each one in a sphere or influence — one in the «architecture of wood»,

which is characterized by beams in complex patterns in the facade and resistant interior walls and comes from the north of Europe, and the «architecture of stone», based on thick walls of brick and mortar and which is original to the southern or Mediterranean regions. Examples of the former are to be found in Oporto, Lamego, Guimarães, Vila Real and Chaves, while the latter is to be seen in Setúbal and Alcácer do Sal. This division, of course, is rather schematic. In Lisbon, for instance, the two models coexist quite naturally and it is even possible to see the two styles in the same house. It is also possible to see this blend in the north of the country, where a wooden framework is almost always supported by a ground floor of resistant walls made of granite or some other stone. The lattice-work used as an exterior protection on doors and windows has become generalized all over the country. This technical symbiosis can be explained by the fact that Portugal was a commercial and cultural entrepot at that time.

The situation of the buildings in the small towns and cities was clearly a compromise between urbanism and medieval land management (the Gothic plot), planned as a whole, even though it was adapted and deformed according to the land available. It was the «city-building», typically semi-detached and so physically inseparable, which has caused one of the main problems in the attempt to recover individual buildings.

The ground floor of the houses was for animals or commerce, depending on whether it was near a rural environment or in the city, while the other floors were either rooms or alcoves, the latter being interior and unventilated. The kitchen was usually at the back of the house, giving directly on to a yard or the countryside. The floors were connected by a «corridor-staircase». The houses were usually elongated, with a narrow facade. In Alfama, in Lisbon, however, we can still see houses that are practically square, either to make the best use of the land available or through some form of tradition.

This internal organization lasted throughout the 16th and 17th centuries, the houses gradually becoming higher either through the need to improve the use of urban space or demographic demands or through technological advances. Some houses had five or six floors.

The Renaissance «cult» model was introduced by way of urban and rural manor houses of the landowning class. These houses were bigger, had wider facades and followed rules of proportional compo-

sition of erudite influence. This influence was passed on to the «bourgeoisie» residences, in which the length of the facade was greater than the width, which gradually led to a more individualist view of urban space and an assertion of the importance of the autonomous family within the urban context.

With this attitude, the size of house became a gauge to social standing and the ceiling height of each floor increased from approximately 2.20 m to 3.00/4.00 m. The post-Renaissance urban house, which was of clear Italian influence, thus tended to have a fragmentary effect on the city and would coexist with the above mentioned medieval types of houses for a long time.

Meanwhile, the «modern» demands of the cities, which had begun to grow, also brought about a series of changes. The streets became wider; the old city gates were demolished to allow the passage of carriages, greater attention was paid to the areas of access to buildings with the introduction of the atrium and more care was taken with public hygiene and comfort with the building of covered galleries.

Parallels must be established here with the types of urban houses of the different overseas areas that were colonised by the Portuguese, mainly to study the local cultural influences on the models transposed, both in the cities of India, Africa, and Brazil and in the Atlantic archipelagos of Cape Verde, Azores, Madeira and the Canaries.

From the Pombaline Period to the Mid-19th Century

A new type of habitation, a four-storey building with a central staircase and two flats on each floor, became general in the cities in the 18th century. Taking root mainly in Lisbon with the reconstruction of the city following the 1755 earthquake, this type of building was a notable and modernising synthesis of the two earlier forms of buildings — the narrow, tall house of the «Gothic» plot and the Italian-style manor house — and the two most important forms of construction — in stone and with a wooden framework.

Innovative from the technological point of view, the Pombaline building articulated the traditional construction of thick main walls in stone with the traditional wooden framework, which now «functioned» autonomously as an anti-seismic expedient — if the stone walls collapsed, the wooden structure would remain standing.

The organization of space was also innovative. The building maintained the rules of classical composition in the facade, but it achieved a new expression as a collective habitation. The litter and rubbish was dumped in the inner courtyard of the block. As in earlier times, the ground floor was reserved for commerce, as was the so-called «sobre-loja», which is an intermediary floor between the ground and first floors. The «noble floor» of the manor house continued to exist, although only formally, as the windows of the first floor were the only ones to be furnished with wrought-iron balconies. The attics, covered with a new type of roofing, helped in the definition of the social hierarchy of these new buildings, which suitably synthesized the new urban middle class that was beginning to appear.

The model that reached its peak at this time would last for over a century, but would be gradually simplified and altered. It became the popular urban house of the beginning of the 19th century and influenced the alteration and reconstruction of older houses, which inevitably received a window with a wrought-iron balcony. It served as a basis for the first stylistic innovations of a Romantic/Revivalist character, in the form of ceramic platbands, walls lined with glazed tiles and windows with an ogival lintel. The structural basis and the Pombaline model of interior space was maintained in all of them to varying degrees.

With the increase in the awareness of hygiene, light metallic structures used as a support for rudimentary sanitary installations, a wash basin in a wooden cubicle, began to appear at the back of the house. The kitchen remained at the back of the house and the metallic structure was enlarged in order to close in the space next to the kitchen. Piped water and drains started becoming more common at this time.

The 19th and 20th Centuries

The rapid technological evolution at the end of the 19th century placed a series of new materials — iron, steel, reinforced concrete, industrial glass — and technical systems — the electrically powered lift — at the disposal of the building industry, which allowed it to introduce rapid and definite changes in construction processes. This evolution led to a greater diversification of the types of buildings

available, such as those of the working class towns, buildings for the bourgeoisie and palaces with gardens, to a definite autonomy of buildings for industry and amenities and to a sophistication of already-existing types like the bourgeoisie residence, which had more floors, a greater functional complexity and more rooms. It was as if there were a vertical «distinction» of functions — attics and top floors for the poorer classes, the lower ones for the more privileged and the ground floor for the porter — as well as a horizontal distinction — an area for the servants, including the closed balcony, kitchen and bathrooms at the back of the house, a «private» area of corridors (which was another innovation that helped in the specialization of the functions of each division as it eliminated the «crossing» of rooms) and bed-rooms, plus a social area of salons at the front of the house where guests were received.

From then until today, three schematic phases of the technico-spatial evolution of the urban house can be considered:

-- The phase of «wooden framework» (1880-1930) with a gradual increase in the dimensions of buildings and their ceiling height to about 3.40 m, technological innovation in the form of iron, glass and lifts, an abundance of decoration and structural debility due to the use of poor-quality stone and partial wooden framework;

— The phase of buildings erected in a mixture of stone and reinforced concrete (1930-1940), still using an internal wooden framework and a metal framework to close the back balcony, which was the time of the so-called first «modernism». There was a reduction in the size of the houses, a simplification and modernization of construction and finishing, such as flat roofs, and floors of tiles and reinforced concrete trusses, although only in the servants' quarters; the ceiling height was reduced to 2.80 m and the decoration was of geometric forms in concrete and stucco;

— The phase of buildings constructed in concrete but still using resistant walls of brick (1940-1960), which in the 40's corresponded to the revivalist building of the «New State», with a structure of pillars and beams in concrete, a material that was also used at the back of the house for the construction of closed verandahs and service stairs; Buildings were erected on a «fish-tail» plan, which eliminated the closed central courtyard and allowed direct ventilation for every room; vestiges of former decorative forms persisted, such as bas-reliefs and a pyramid-shaped construction crowning the roof.

The 50's brought the high, detached block of flats with abstract or «modern» forms or a return to the four-sided block with an inner courtyard, the houses in the latter being no more than 12-15 metres in depth and having a very simple lay-out; social changes brought about a reduction in the size of the servants' quarters and the outside service stairs disappeared as the buildings were now non-inflam-mable.

From the beginning of the 60's, housing received an enormous number of spatial and formal innovations as a result of the interna-tionalization of new concepts of urbanization and housing that came from Central Europe by means of the «Charter of Athens». These include the blending of the service area and the lounge into the kitchenette and sitting-room, the development of the duplex and the disappearance of ground-floor shops. Buildings were raised on pillars and the open «ground floor» became a parking space. The «habita-tional machine» devised and publicised by Le Corbusier became com-mon in the 60's and 70's in the form of highrise buildings with exterior service galleries instead of interior staircases, especially in social housing, and a gradual appreciation of living on the higher floors.

The massification of this type of housing in a tourist, suburban and «economic housing» context led to a drop in quality and, at the end of the 70's and in the 80's, a reaction on the part of urban plan-ners who advocated a «return to the towns» i. e. a preference for the traditional blocks with few floors. But the «modern» models of hous-ing, with many different types but a clear technological oneness based on concrete remains, despite everything, dominant and replete with future potential owing to the evolution in construction and its correlative systems of support, such as pre-fabrication, the standardi-zation of components and «intelligent buildings».

THE PORTUGUESE CITY:
A CHARACTERISTIC FORM
OF URBAN SPACE

Introduction

As a complement to architecture, the study of the cities helps to place it in perspective and give it the sense of a whole in terms of space and of continuity in terms of time.

The aim of this chapter is to focus some characterising aspects of cities that are of Portuguese origin or inspiration and briefly refer to the most interesting urban communities that exist and which have been consolidated throughout the centuries.

Looking at architecture from a complementary point of view, it is not so much intended to write the history of the city in Portugal — to do this the reader can consult the bibliographical references at the end of this chapter — as to interpret the urban system «invented» or perfected in the country and then continued in different continents with its own peculiar features during the overseas expansion. The intention is to look at the awakening of these phenomena, its zenith and its decline, or, if one wishes, its modernization.

These characteristics are patent once we see the sites chosen for the building of these cities, as is mentioned in the work «O Lugar da Cidade Portuguesa» (The Location of the Portuguese City), which is here once more referred to and developed.

In fact, it has already been mentioned, or at least perceived, in several historical and geographical studies that the urban areas of Portuguese roots have a personality of their own or, one may say, as if an idiosyncrasy that began with its own «sense of place» was confirmed in its choice of a place to plant its roots. In a precious synthesis on the Portuguese city, the geographer Orlando Ribeiro says: «There

are hardly any cities on the plains of Portugal [...] Some show a preference for high places, on steep slopes and well defended, others combine a rugged hill and a bay on the coast, typical of Mediterranean urban sites. Whether they come from local isolated and archaic civilizations or from a widening of maritime commercial relations, this attraction for impregnable sites has been demonstrated more than once in the course of our history, with the result that there are few countries that boast so many hilltop villages as Portugal.»

To these observations regarding the cities of mainland Portugal, the references of other authors on overseas cities must be added, especially those in Brazil. According to Robert Smith: «Like Lisbon and Oporto and in accordance with Portuguese custom, Bahia was founded on high cliff that dominated a large extense of water.»

It is thus necessary to make a deeper analysis of the reasons and factors that have led people to choose areas with certain geographic or morphological characteristics to set up Portuguese cities, as well as to refer to the most outstanding features of this occupation and the growth, evolution and transformation of the cities' structures from the medieval burghs of Portugal to the ones settled overseas.

The word «city» is used here in the sense of urban space, without worrying about the distinction between a town or an administrative centre considered as a city, as this is the general sense of the subject of this chapter. Reference must also be made to the confusion that may arise between the «location» and «situation» of urban centres. The main interest here is the interpretation of the two words. «Location» is used in general overall terms of the territory, referring, for example, to the tendency to set up cities in the coastal area of the country. But a more concrete concept of «situation» is required when speaking about a smaller scale, such as the choice of a hill or a valley to settle.

The need for defence, the proximity of water, the suitability of the land for building and protection against the climate have always been traditional factors in the choice of a site to settle. Political, administrative, religious and economic necessity, the rendering of services and the equidistance between the urban centres dictated by areas of influence have always been overriding factors of location. Nowadays, demands of accessibility and adequate public transports have acquired an ever-increasing importance due to the advent of industrialization and the omnipotent philosophy of economic growth, as townships appear and grow at fulcral points of the transport system.

In one way or another, all these factors contribute to the definition of the picture of urban location in Portugal. Jorge Gaspar wrote: «There may be several reasons for the choice of a certain site for the installation of a community — magic, religion, military, economic, recreational — but there is always a functional content.». A complementary, anthropological reading that stresses the Portuguese collective urban «temperament» must be added to this practical viewpoint.

Antecedents of Urbanism in Portugal

From the Culture of Hilltop Fortifications to Romanization

«The proximity of the river gives more protection and assures the convergence of all the paths along the valley. Such is the image of the three main cities (Lisbon, Oporto and Coimbra), growing from a 'germ' planted on the side of an isolated hill rising from the plain, both as inaccessible and as near to the river as possible. [...] Where a rugged hill dominates the bay, estuary or navigable waterway, the city or settlement on the bank of the river maintains distant relationships either by means of the road to which it is connected or by sea.» Following his synthetic description of the Portuguese urban «locus», Orlando Ribeiro attempts to base its characteristics on the existence of an ancient «Castrum» tradition, or at least on the presence of a proto-urban and pre-Roman culture in the west of the Iberian Peninsula, probably of Celtic roots, which the rationalising urbanism of the Latin invaders never managed to completely extinguish.

In fact, the Iron Age Celtic culture produced well-known centres, like the one of Briteiros, a fortified settlement near Guimarães in the north of the country, which remained occupied after the Roman invasion.

Ribeiro also wrote: «If it is true that many 'castra' were destroyed, [...] others were transformed into ideal Roman cities, their lay-out following the current urban concepts of the Empire. The ruins of Conimbriga [...] reveal a settlement with streets, squares, opulent

residences, baths and industrial premises similar to the ones the Romans erected in other places in their vast dominions. But the name and the site (Celtic 'briga', Latin 'oppidum') show a fortified eminence, a rocky, walled spur of land that rises above the flat, fertile land through which the road ran.»

Santarém and Beja (then called Scallabis and Pax Julia), two important cities that were seats of «conventus» (as was Braga, «Bracara Augustus», which had been founded earlier but was used by the Romans) at the time of Vespasian, were founded by the Romans on steep hills and seem to confirm the tendency for them to blend their traditional geometric lay-out that was more suitable for the plains with the rooted local taste for rocky hills and elevations. The territorial picture of the time of the Empire clearly showed that the Romans were better off occupying the interior rather than the coastal area, as Ribeiro points out: «Apart from Salacia (Alcácer do Sal) and the ports of the Algarve, it seems that sea-borne trade did not increase. A powerful organization of the territory based on a perfect system of land transport was in contrast to the certain abandonment of the coastal area, which was swept by high winds and faced a sea with no sign of any islands. This fact was one of the main reasons that the administrative centres were in the interior [...]»

It can thus be seen that most of the important roman towns were in the interior, many of them in mountainous country. Besides the three «conventus» centres already mentioned, other important examples can be pointed out. There were eight «civitates» capitals in the Alentejo, among which were Eborac Liberalitas Iulia (today Évora), Miróbriga (the ruins of which are to be found near Santiago do Cacém), Arucci (Moura) and Myrtilis (Mértola). Between the river Tagus and Douro were the capitals of Sellium (Tomar), Egitania (Idanha-a-Velha), Viseu, Aeminium (Coimbra), Bobadela (near Oliveira do Hospital), possibly Lamego and Sabugal, besides other of uncertain location. The one exception on the coast in this area was Felicitas Julia Olisipo (Lisbon). To the north of the Douro lay the capital of Aquae Flaviae (Chaves). The only other capitals that were on the coast were in the Algarve — Ossonoba (Faro) and Balsa (Tavira). This is evidence of an active coastal life, although it was secondary to that of the interior.

In different ways, in the territory to the south of the Douro, which would also feel the impact of the Muslim occupation from the 8th century, the burgs of the north were gradually occupied by the

Germanic peoples from the 5th century and underwent a process of «deromanization». At the same time there was a growth in Christian religious feeling and a definition of fulcral towns and collective symbols. It was the beginning of the palaeo-Christian and Suevi-Visigothic towns and their intrinsic instability and insecurity that would lead to the process of the fragmentation of centralised functions. This was aggravated by the conflict between the «civitas», centred on the Cathedral, the innovative cemeterial basilica, seat of the power inherited from the civil-religious «forum» and the bishop, who was very often from the old, decadent senatorial class and the fragmented Roman administration, and the «castellum» seat of the recently-installed military power, which was less urbanised but more violent. This bipolarization, which was an innovation after the centralised Roman administration, would continue, become consolidated in medieval times and would probably be an important basis for the structural characteristics of the future Portuguese city of the overseas expansion.

From the Muslims to the Reconquest

The urban tradition — confirmed with Romanization and shaken by successive waves of Barbarians (Visigoths and Suevi) — was resumed by the Muslim invaders who, despite everything, would alter some features of urbanization owing to their more individual, intimate and fragmentary culture. Orlando Ribeiro wrote: «The Muslim cities obeyed a concept that was in some contrary to that of the Romans: houses that gave on to an intimate inner patio, narrow, twisting streets where every corner afforded a refuge for attack or defence, blind alleys that led to private homes and separated family life from the bustle of the streets.» In turn A. H. Oliveira Marques said: «Instead of the street, which was a dynamic element of communication, the house was the static element of fixation and, as such, was considered to be the central cell of urban settlement in a Muslim city.» The Muslim city therefore assumed a great importance in the Peninsula, especially as a guarantee of the continuation of the former urban tradition, which was done by taking advantage of the already-existing cities. Although it distorted its lay-out and created some new extensions (Alfama is its paradigm), it did not alter the main features of urbanization.

But the contents and symbols of the city underwent changes owing to the introduction of a very distinct cultural universe that was based on the traditions of the Middle Eastern civilizations. The fusion of these values with their western counterparts would from then on begin to penetrate the «soul» of the Iberian burghs.

It was then that certain aspects arose or were enhanced, like the appearance of separate quarters (each one with its own mosque), the presence of «foreign» communities (which would later play an important role in the coexistence of different urban groups), the «significance» of the market (extremely important in both a rural and mercantile system) and the geographic opposition between the aristocratic city (the Alcazar, the «upper part») and the plebeian (the Almedina, the «lower part»). Finally there is the part played by the rural landowners who invested in urban property as a means of realising their capital, contrary to the bourgeoisie mentality of investing in stock, and who would build the foundations of the future social groups that would later live following this same «static» attitude.

The Muslim presence also helped to keep the cities functioning, in a period, the first two centuries of the Middle Ages, when an intense «disurbanization» was felt throughout Europe. This brought about the signs of asymmetry between the urban tradition of the north and centre of the Iberian Peninsula, which the Muslims occupied for less time, and the south, where they stayed for centuries. According to A. H. de Oliveira Marques: «Of the present 47 provincial capitals of Spain, 35 were founded by the Romans and only 12 can be considered as medieval, only four of which were of Muslim origin. Of the 11 provincial capitals of Portugal, not one was of Islamic origin. [...] If the Muslims did not found cities, however, accepting the ones they found as they were, this does not mean to say they did not exert any influence on urban life. Of the above mentioned 47 capitals, some 20 reveal a clear Islamic stamp.» Twenty-nine of the above mentioned cities were occupied by the Muslims for four centuries or more and significantly all of them are south of the River Douro.

Thus while the urban centres in the north of the country between the 12th and 14th centuries were few in number, small in size and of little importance, the ones in the south had much more vitality. As far as the present Portuguese territory is concerned, it can be said that there was almost a «frontier», made up of the River Mondego and the

Estrela mountain chain, between a predominantly rural society to the north, an area settled by the Germanic barbarians, that tended to the dissemination of the settlements and a basically urban society to the south, with a dense concentration of communities between the coast of the Algarve and the Tagus valley. Orlando Ribeiro also mentioned the fact that this contrast was long-lasting, as the census of 1527 showed: «Of the 33 urban agglomerations with more than 500 houses (2000 to 2500 inhabitants), 25 were in the south, 3 in the centre and 5 in the north [...]. Thus only the Tagus valley, the Alentejo, especially the eastern part, and the Algarve seem to have maintained an uninterrupted or renewed urban tradition since antiquity [...].»

Architecture itself strengthened this tradition during the Middle Ages — as if it were «re-finding» itself — with the construction, as already mentioned, of Gothic «urban» monuments in the south, in contrast to the «rural Romanesque» in the north, which was then followed by the appearance of «civic» Renaissance in the central-southern areas, namely in the cities of Évora, Tomar and Coimbra. Consulting the «Duarte D'Armas», an inventory of existing fortifications in the first half of the 16th century, it can be seen that 22 of the 55 castles along the Portuguese-Spanish border (from Castro Marim in the south to Caminha in the north) are south of the Tagus. This is almost a half, for a very small part of the frontier, which confirms the importance of urban spaces in this area at this time.

The First Dynasty and the Resurgence of Cities

But the first great impetus of urban growth after the foundation of Portugal happened long before the 16th century, had a centralising effect and expressed an urge to unify the territory. Following the first efforts of King Sancho I to revive the deserted frontier towns in the 12th century, the consolidation, or even a relaunching, of urban life took place in the reigns of Afonso III (1248-1279) and his son Dinis at the turn of the 14th century. The urban reforms then ordered and undertaken, only in the area of the new border with Spain, covered 4/5 of the existing fortresses, strongholds and castles.

Besides the extensions planned in Lisbon (Rua Nova) and the foundation of new townships, like Vila Real in the Trás-os-Montes and Vila Nova de Cerveira in the Minho, in the reign of King Dinis, many of the strongholds that were renovated or enlarged showed signs, although simplified, of a recovery of a geometric urban tradition that had been long forgotten. This tradition curiously reappeared in its clearest form in the eastern part of the Upper Alentejo, where the former urbanization seems to have lasted with greater intensity, maybe as a result of the long-past but still — felt influence of Mérida, the old capital of Lusitânia.

In fact, the lay-out of Óbidos, Monsaraz, Alegrete, Vila Viçosa and Redondo suggest similarities with the northern towns founded by the kings of Spain in the 12th century or the «bastides» that were constructed in the south of France in the 13th and 14th centuries. But they differ from these in that they are built on high ground and have a much simpler and more elementary structure.

Of the several townships that achieved a significant growth in the Middle Ages, reference must be made to some differences in terms of structure that prove the ever-increasing complexity of the urban phenomenon of the time. Braga, Oporto, to some extent Lamego, and Évora are clear examples of the radio-concentric type of growth that is usually associated to this period, with the burg spreading out in a series of «circles», sometimes walled, sometimes not. The three northern towns are related with the gradual increase in the importance of the burg as the seat of a bishopric or county, which was a characteristic of «Romanesque urbanism». Guimarães and Guarda are typically elongated towns with a clear walled outline. Trancoso, Torres Vedras, Castelo de Vide and Silves are cases of towns growing in the «shadow» of the castle, which remained at one of the extremities of the new part of the town. Leiria, Santarém and Lisbon have a more irregular lay-out that shows the influence exerted by their Muslim occupation. Finally is the patent geometry of Chaves, Caminha, Viana do Castelo, Melgaço and, farther south, Tomar, Montemor-o-Novo and Aveiro, formally similar, but all somewhat different: the first-named because of the evidence of its Roman lay-out, the following four because they were so-called «royal» towns, which from the 13th century possessed new areas for the increasingly powerful craftsmen and merchants (the word «town» in its present sense appeared in the Romanesque period), and the last two because of their late medieval lay-out, already showing signs of the pre-Renaissance urge for regularity.

There are several other possible interpretations of the reason for the existence of fortified towns in the interior of the country in this period. On the one hand there are the studies of a mythical and esoteric character like those of Juan G. Atienza, who enhances the role of certain religious orders in the founding of towns: «Together with Galicia, Ireland and Brittany, Portugal was the secret testimony of a civilization that was the bearer of the arcane tradition that quickly extended into the interior of the Iberian Peninsula and left its mark with its myths, rites and symbols [...] King Afonso I assigned to the Templars the protection of the Monastery of Alcobaça and the magic county of Fátima and Tomar, where in 1160 they would build the main seat of the Portuguese Templars and the subsidiary seats of Almourol (on an island in the middle of the Tagus) and Bode, complemented by those of Pombal, Penela, Castelo Branco, Idanha, Nisa, Monsanto and Ceras, and even Óbidos (today 10 kilometres from the sea).»

There are also more positivist works that were started by Fernando Gonçalves and which refer to the urbanising role of other religious orders, including the urban occupation in Africa: «Besides the undertaking that was clearly manifested by the Order of the Sword — the conquest of the sovereignty of a city — it is also possible to discern a meaning that is related to what can be termed as a 'building instinct' [...] Although it is not possible to put an end to the controversy regarding the real existence of the Order of the Sword with the elements available, further research is justified in the fact that it could bring to light one of the paradigms of urban theory in Portugal.» When all is said and done, they are contributions that also came from a Middle-Eastern culture, although in this case diluted by the Christian religious philosophy, and converged with the Middle-Eastern urban «apports» of the Muslims.

But it is above all the interpretation in general terms of the character and evolution of urban settlement in the interior that interests us here. And if this evolution today tends to follow patterns of settlement in places situated «on flat land» (as was the case of Barrancos, Vila Nova de Ourém, Caldas da Rainha and Reguengos de Monsaraz, which replaced Noudar, Ourém, Óbidos and Monsaraz respectively when the latter lost their original defensive function and acquired a mere «archaeological» statute), at the end of the Middle Ages fortifications acquired a less functional and more poetic role, as new models

of urban life were created. The hill ceased to be an active military bastion and became a memorial, a sign that the population did not wish to lose the feeling of their old traditions.

A First Synthesis

A divergent trend, contemporary and complementary to the above mentioned settlement of the interior, concerning the location of towns and the structure of the territory was confirmed during the late Middle Ages. This was the gradual displacement of the main urban centres to the coastal strip of the country. Being on the coast, they enjoyed a faster growth and increased their importance in relation to the towns of the interior and it was in this period of transition that Lisbon became the capital of the country. This trend was not new. From the time that the «national» territory had started being defined by the Reconquest along the eastern coastal strip of the Peninsula, the new nation had searched for its own centre of gravitation, one that would distinguish it from that of the Romans, Arabs or even the Visigoths. We shall quote Orlando Ribeiro once more: «Assailed by Moorish and Norman pirates, the northern coast was the object of special care before and during the first years of the monarchy: townships were restored and fortified, benefits were granted to settlers willing to leave the interior, a defensive navy was organised.»

But it was the increase in international sea-borne trade from the 12th century onwards that went hand in hand with the rebirth of the cities and the rise in port activity. At the same time nature played its part with the gradual silting up of the country's main rivers, thus cutting off fluvial cities from the sea. Little by little, Silves, Alcácer do Sal, Santarém, Coimbra, Lamego and Braga would be overshadowed by Portimão, Setúbal, Lisbon, Figueira da Foz, Oporto and Viana do Castelo respectively, ports that were on the estuaries of their rivers and free from the silting up process.

These rapidly expanding towns were enclosed in new and more complex walls, although they continued to have a certain similarity with the former fortified burghs in that they took advantage of hills and other natural elements and had a relatively regular internal structure, mainly because most of them derived from this type of urban

centre. But a new type of coastal town began to appear and a spatial and functional dialectic was created, that of the defensive «upper town» and the commercial «lower town». The result of this slow but steady transition on the coast and in the estuaries, especially to the north of the Tagus, would finally become the city that can be considered as the model of the typical Portuguese urban centre that we shall now discuss in more detail.

This still formally fortified city, already a port or coastal town, was a centre of a dynamic and notable creative force of «places» and original, constructed environments that the overseas expansion would use to the full.

Features of Expansion: An «Urban Diaspora»

At the end of the Middle Ages (14th-15th centuries), the Portuguese city acquired facets that would crystallise it into a clear model of an intemporal dimension. We shall characterize it with the help of Orlando Ribeiro's quotations.

It was a decisive phase especially at the beginning of the 15th century, in which the country turned westward. The sea, bays and estuaries become the cornerstone of a dynamic trade. «The function of the port is crucial and this was the reason that the three biggest cities stood in sheltered estuaries and why only four of the ten biggest cities were not on the coast.»

Being ON THE COAST and almost compelled to be MARITIME (or at least fluvial), the city would also be characterized by a search for a specific orientation, a taste for an adapted «TROPISM» which led it to look south. «There are many cases of cities and towns that stand on the right bank of a river, facing south and having suburbs on the opposite bank — Barcelos and Barcelinhos, Amarante and the quarter known as Além da Ponte (Beyond the Bridge), Oporto and Vila Nova de Gaia, Abrantes and Rossio ao sul do Tejo, Lisbon and the 'Other Bank' [...]»

At the same time it became composite, BIPOLARIZED, the residential area, following the «castrum» tradition, being erected on the high points that could be more easily defended when necessary, while the business centre was placed in the flat «downtown» near the port and

the river or sea. «The area on the hill was where the most noble and prestigious activities were carried out, while an area of commerce, industry and circulation was developed in the flat area. Hence the division between the Upper and the Lower, or Riverside as it is called in some places.»

These basic features of the Portuguese city — coastal and commercial, maritime and tropical and bipolarity — that appeared in the 14th-15th centuries were adaptable and would not be lost but enriched in their contact with new environments, acquiring, if this is the right word, new qualities as if they were mutations of their own intrinsic and initial feeling.

This process became even more original in the 16th and 17th centuries when, for various reasons, this model distanced itself from the contemporary Spanish colonial town, even though they both belonged to the same southern urban «family». These reasons had to do with the political autonomy and unity that Portugal had enjoyed since the 12th century, which was unique in the Iberian Peninsula, and the different urban tradition that had already been felt at the time of the Roman occupation, the idea of «finisterra» versus «Mediterranean». So while it can be seen that the Hispano-American township was built in the interior, on a monumental scale and with a centralist geometric structure, its Portuguese counterpart, in contrast, was built on the coast and was a continuation of their vernacular urban structure.

In fact, the centric, static «soul» of the Hispano-American township, the central point of which is the intersection of two axes of a rectilinear network of streets at the «plaza mayor» (central square), which was the centre of power, contrasts to the «ex-centric» and «erratic» Portuguese lay-out, which was a succession of squares (for the Town Hall, for the church, for the monasteries and convents) along an irregular «main road», which was its «umbilical cord» and ran into the surrounding open fields, the «rossios».

The Atlantic Dimension: Cities of the Archipelagos

«The first mark of Portuguese expansion, the archipelagos of Madeira and the Azores [...] are a replica of Portugal's human physiognomy in a physical landscape that is unknown to the mainland.» As Orlando Ribeiro

points out, they were strange lands, made up of insecure islands, isolated in the middle of the ocean, subject to avalanches, earthquakes and vulcanic eruptions and frequently victims of pirates. It was here that the Portuguese set up their first settlements outside the mainland, and they would be immediately followed by ones in the islands of the Canaries, Cape Verde, Fernando Pó and São Tomé.

The process of Atlantic urbanization has already been analysed in previous studies: «[...] Urban settlement certainly began as a result of the overall settlement of the islands nearest the mainland, which were obviously the ones discovered and visited first, and in small areas within the archipelago that could be more easily bleared, which, after all, were more similar to the world the settlers knew. Hence the settling of Porto Santo — Madeira and Santa Maria — São Miguel.» This westward movement of urban occupation, confirmed by the successive dates of the foundation of the Azorean and Madeiran towns, was cuminated with their elevation to the rank of city: [...] if Funchal was the first Atlantic city (1508), it was soon followed by Angra (1534) and Ponta Delgada (1542), the promotion of the las-named changing the luck of São Miguel's natural capital Vila Franca, which was prevented from continuing as such by a natural catastrophe in 1522. In Cape Verde, where occupation was more difficult owing to climatic and morphological reasons, Ribeira Grande (1533) on the island of Santiago was the only town founded in the 16th century.»

The evaluation of Portuguese participation in the Canaries is more complex, however, owing to its being mixed with the predominant Castilian occupation. It seems that there was a direct Portuguese intervention in the development of Las Palmas de Gran Canaria, where there is a «Calle de los Portugueses» in the town's oldest quarter la Vegueta, and in Santa Cruz de la Palma, the situation and structure of which are remarkably similar to those of Horta on Faial. São Tomé and Fernando Pó are part of a process of an equatorial African urbanization and will be referred to later.

It is above all in the Azores and Madeira that a relation with the above mentioned urban location can be felt, as has already been mentioned in regard to Funchal: «It is certain that the Iberian mainland tradition strongly influenced both the choice of the sites and the construction of the new settlements and their internal organization and general character — in other words, their urban personality [...] with a large percentage of the towns being on the southern coast, facing

south or south-west, as was traditional in mainland Portugal. In the two archipelagos, only one town goes against this tendency — Ribeira Grande on São Miguel — and only one important town faces north — Santra Cruz on Graciosa. It is a true 'cultural tropism', which the climatic conditions help to maintain and to which insular factors give a renewed personality of its own. The settlement near streams or in sheltered bays is almost systematic, as it was on the mainland in the search for riverbanks and the protection of an estuary.»

The possible parallelisms with the urban spaces of the mainland are also innumerable from the point of view of internal structure. There are analogies between Vila do Porto on Santa Maria and Monsarraz in the Alentejo, in relation to the type of fortified town found in the eastern area of the province, and locational and functional similarities between Funchal and Setúbal in that they are of the more advanced type of coastal town that stands on an estuary. Other similarities come to mind, like the one between Angra and Tomar and their geometric lay-out and bipolarity established between the main street and the «wharf», or the one between Ponta Delgada and Lagos in the general morphology of urban space and the adoption of similar types of buildings. It is interesting to point out that hesitating between the adoption of urban models with a predominantly defensive function in the interior of the country or waterside models, the urbanization of these two archipelagos clearly shows that it was formed at the time of the transition from the medieval, or «closed», to the «modern», or «open» type of city.

In the Cape Verde and Canary archipelagos, the sub-tropical climate led to the first distortion in the orientation of the settlements, as it became necessary for the townships to face north or west in the former and frequently northeast in the latter in order to take advantage of a refreshing breeze that blows from that direction. It was on those coasts, therefore, that the most important communities developed.

In short, if the Atlantic city of Portuguese roots, as defined in the 15th and 16th centuries, transposed its mainland characteristics across the ocean, it became enriched with a diversified series of values, from the new INSULAR dimension that permeated the urban spaces to the «multiplication» of geographical orientations, which would not only be a confirmation of its «*tropicism*» leanings but also an assumption of its «*traditionalist*» onus — maybe as a reaction against a greater impulse demanded in both settlement and development.

The cities of the Atlantic islands, the growth of which became more stabilized after the 18th century, have maintained a remarkably formal and spatial balance until today. Examples of this are towns of simple linear construction, such as Vila do Porto (Santa Maria), Santa Cruz (Graciosa), Lajes (Pico) and Ribeira Brava, Santa Cruz and Machico on Madeira, and the small towns that intersect the irregularity of their streets with a rather elementary rectilinear network or other streets, as in Ribeira Grande and Ponta Delgada (São Miguel), Praia and Angra (Terceira), Horta (Faial) and Funchal (Madeira).

The Luso-Brazilian City

«Although the cities of colonial Brazil are in many respects different from those the Portuguese constructed in their homeland, Morocco, Southern Africa and Asia, they preserve, in many and diverse circumstances, the unmistakable stamp of the mother-country that regional characteristics were never able to erase. They can, therefore, be justly considered to be Portuguese cities in Brazil rather than Brazilian cities.» (Paulo F. Santos).

Even when taking a critical look at the value of Brazilian urbanism as a cultural «apport», scholars generally take these affinities for granted. There is a certain «purity» in these cities and at the same time an analogy with the towns of Portugal that is evident and, up to a point, attractive. Robert C. Smith, Mário T. Chicó, Leonardo Benevolo, Ramon Gutierrez, Murillo Marx and others referred to functional aspects such as the «rossios», the «main road», the «upper» and «lower» parts of the town, the structural characteristics like the medieval-Renaissance type of «informal» lay-out, fairly regular or geometric, the image of churches and convents integrated into the landscape and the location, all of which help and strengthen the comparison.

The aspects of the geographic situation are pointed out by Murillo Marx in the following manner: «The map of Brazil denotes a notable disequilibrium. Its urban agglomerations are concentrated along the coast. [...] The disproportion becomes even more evident if we consider the population of these agglomerations. Almost all the biggest ones follow the norm and are located on the coast or near it. The two biggest cities of São Paulo and Rio de Janeiro are outstanding

examples of this demographic disequilibrium and the situation is the same in most of the state capitals from Belém do Pará to Porto Alegre.»

New analogies can be established if we look at the choice of sites for the foundation of the Brazilian urban centres, once more according to Murillo Marx: «The first towns were set up on the coast in order to be in contact with the mother-country and the rest of the empire, which was turned to, shaped by and linked to the sea. The port, therefore, was essential and crucial for the setting up of new factories.»

But the medieval inheritance must be added to this need of the sea, both defining the already mentioned bipolarity of the Portuguese township: «Like the defensive system of both (Lisbon and Oporto), Bahia was surrounded by walls with towers and gates and interspersed with forts. The best sites, on the top of the hills, was, as in Portugal, reserved for churches and convents, public buildings and manor houses, while commerce was carried out in the 'downtown' near the docks.» (Robert C. Smith).

We would like to mention something here to back up our point of view that Portuguese townships were located on the coast and on hills owing to the aptitude and the PREDISPOSITION of the colonialists and not so much for defensive purposes of because they provided good port facilities. The case in question is the town of Recife, founded by the Dutch in the 17th century, who for exactly the same reasons chose a flat swampy site, just as the English did to build Bombay. And various ports of Spanish America that functioned apart from the main cities were located in the interior.

This taste of the Portuguese, obviously linked to a specific understanding of the landscape, perplexed the Dutch invaders. Joshua Castro referred to a criticism made by Barlaeus, at the time of Maurice of Nassau, of Recife's neighbour, the typically Portuguese Olinda, irregular and hilly: «Although he recognised that Olinda was remarkable for its beautiful buildings and temples, he condemned its inadequate situation in the following words: 'The site, for the love of the hills that surround it, is rather uneven and only by luck will human industry be able to provide for it'» The Dutch thought it impossible to defend and difficult to understand so they later purposely burnt it to the ground.

In fact, it is not easy to understand, as Paulo F. Santos said, that «[...] in that apparent disorder, which leads one to admit [...] the

inexistence of a previous plan or coordinating idea, that there are an organic coherence, a formal correlation and a unity of spirit that confer a certain genuineness on it [...] as a spontaneous and sincere expression of a system of life which is so often lacking in a city that has a regular lay-out that gives it the appearance of a chess-board».

But let's return to the choice of sites. The wealth of new geographic situations on the Brazilian coast provided new solutions for settlement: in huge bays, where an authentic urban microcosm was created, with several strata of hierarchy including the «engenho» (the buildings and mills of the sugar plantations), towns and big cities, as happened at «Recôncavo» of Salvador da Bahia and at Guanabara of Rio de Janeiro; the banks of and the islands in the estuaries of immense rivers, as was the case of Belém and São Luís; on the lagoons near the coast, as was the case of Porto Alegre and Rio Grande in the 18th century; and even other frequent situations, in the words of M. Marx: «Some islands, or better still, the channels that separated from the mainland, sheltered from the currents and winds, were propitious for the establishment of São Sebastião and São Francisco do Sul» — as later happened in relation to the city of Desterro in Santa Catarina.

The size and the newness of the territory to be occupied by the Luso-Brazilian city gave it, as we have seen, new facets within the basic features already mentioned. It exalted and raised the city to «American heights» giving it a LUXURIANT DIMENSION, the paradigm of which is Rio de Janeiro. It discovered an orientation to the north and west, a TROPICISM INVERSION of the southern hemisphere. From Prata to the Amazons, it compelled an urban hierarchy of the territory, giving rise to the huge areas of the Northeast (with its centre at Bahia), the Southwest (Rio-São Paulo) and the extreme north and south, with Belém-São Luís and São Vicente-Rio Grande, like huge «countries» that were only governable in fragments on a CONTINENTAL SCALE and never really managed to merge into an empire.

The Portuguese City in the India and the Far East

The taste for locating towns on the coast and perched on hills, now mainly for strategic reasons, was also taken to distant places like Japan (Nagasaki), China (Macao), southeast Asia and Oceania (Malacca, Flores)

and even the Arabian peninsula. If the settlement in the Far East, especially Macao, followed the pattern of the models mentioned above, that in the Middle East was conditioned by military necessity, by the urban areas that already existed and by the aggressiveness of the neighbouring territories, which meant that settlements were erected with warfare in mind and did not become what may be called mature townships as they did in Morocco. This can be seen in the existent vestiges of the fortresses of Soar, Muscat and Ormuz in the Persian Gulf.

Despite encountering somewhat similar constraints in India, it was in this area where the process of urban development really flourished to its full potential, both from the point of view of permanence and planting deep roots, especially on the west coast.

Contrary to the theory defended by Mário T. Chicó that there were «two types of city — the community implanted in Brazil, which was deeply rooted in the history of Portuguese urbanism and inspired in the ideal city of the Renaissance, and the one that appeared in India» there does not seem to be a great difference between the Indian city of Portuguese influence and its Brazilian contemporary, at least as far as overall organization of the territory, location and internal structure are concerned.

Even if the obvious necessity to speed up building programmes and to modernize military structures in India due to urgent defensive reasons makes them different from their Brazilian counterparts, this does not seem to be reason enough for any alteration in the deep-rooted typology of the cities, factories and fortresses erected.

If, therefore, the fortifications themselves are more «modern», in 16th century terms, than those of Brazil — Damão (to the north of Bombay) and Meliapor (in the state of Madras) versus Salvador da Bahia — an overall comparison of their urban plan shows that, besides the apparent contrasts, the same regularity in both the lay-out of the streets and the distribution of central functions. On the contrary, Baçaím has fortifications of a regular pattern and an elongated irregular lay-out inside its walls, as have Chaúl, Cranganor, Cochim and Cananor, the examples that Chicó refers to as having a «certain regularity».

Chaúl, near Bombay and today in ruins, seems to be a typical example of a township that grew slowly. It was built on a linear plan alongside the main road that led to the late-medieval-type stronghold

that was later surrounded by walls. And this without speaking about the old city of Goa, which, despite the fact that it existed before the Portuguese occupation, was certainly reconstructed by conquerors who were thinking of Lisbon in terms of an archetype. On the other hand, a clear morphological comparison can be made between the Brazilian towns of São Luís do Maranhão and Belém do Pará, which have a very distinct geometry, and the slightly later Baçaim and Damão. It seems advisable to view the Indo-Portuguese city within a framework of greater diversity regarding patterns, types and variants (structure, location and lay-out) and not by a simple comparison with their Brazilian counterparts.

But let us return to the question of location and choice of sites. From South Malabar to the Gulf of Cambay, the Portuguese looked for the estuaries of rivers (Damão, Cochim, Cranganor), off-coast islands (Goa, Diu), bays (Chaul) and promontories and peninsulas (Cananor, Baçaim) to establish their military-urban settlements from 1500 onwards.

As far as the 16th and 17th centuries are concerned, there are sufficient analogies in the geographic environment and settlement to try and make a general case by case comparison between occupation in India and Brazil (as has already been analysed in another text). Both in Goa and Bahia a microcosmic territorial environment that recalled the «distant» motherland was created, both in terms of the hinterland and the city. «This analogy in the choice of riverside, coastal or insular environments for settlements that were introversive but protected from pirates and the sea can be detected in the enclave of Malabar and in the Recôncavo of Bahia, i. e. Goa along the banks of the Mandovi and Bahia in All Saints' Bay. The picture is completed by hundreds of churches and small rural premises, with some medium-size settlements attempting to form a more densely populated area that would provide more cohesion and strengthen the similarity with the environment of the motherland [...]. The liking for the occupation of off-coast islands is also curious. Such cases are the Malabar triad of Goa, Bardez and Salcete up to the 18th century and Itaparica and Frades in Recôncavo, always containing little cities like Margão in India or Itaparica in Brazil.»

These two cities were considered as «central zones» and were incorporated into the two vastest continental areas of these immense spaces that «[...] in confrontation with the scanty resources available led to the need to break up into fragments that could be more easily

controlled, backed up by control of the sea, the reverse of which was the existence of vast intermediate areas for settlement. Several of these areas of permanent settlement were gradually defined in both India and Brazil and in each case can be divided into three basic zones: the 'North', or frontier land used as a military 'cordon' to halt the advance of aggressive neighbours — the complex of Cambay, from Diu to Bacaim and Chaúl in India and the area of Maranhão and Pará with Belém and São Luís in Brazil; the 'Centre', or the main area of domination, geographically equidistant from all the other enclaves and so a natural seat of government and administration from a short — or medium-term point of view — these were the regions of Goa and Bahia-Olinda; and finally the 'South', the area of greatest instability and of secondary interest, where, for one reason or another, settlement was either difficult or less essential — from Cochim to Cananor in India and from Rio to São Vicente in Brazil».

The structure of the cities of the two continents can also be compared. Goa, occupied from 1510, and Olinda, founded in Pernambuco in 1534, were urban centres from where the surrounding areas could be effectively controlled. They were constructed with care, advantage being taken of natural elements like bars and coral reefs and their walls being either replaced or completed by a more «organic» or «freer» internal structure, which in turn was adapted or distorted according to the local relief. Then there were the centres like Margão (Salcete) and Ouro Preto (Minas Gerais) that were developed from the beginning of the 18th century. Although founded rather far from the coast, they have the characteristic linear but irregular structure of the «main road» and a series of «squares» containing churches that defined the medieval Portuguese town.

The Urban Spaces in Africa

Looking at Africa not as a single territory or as a goal to be reached and colonised in the period that we are dealing with — the 15th to the 18th centuries — but as a series of «staging posts» that would be used to reach India and explore Brazil, its occupation in terms of urbanization is not so clear or coherent. The following geographical areas may be taken into account:

— The fortified cities or fortresses in North Africa. They were the first places occupied by the Portuguese overseas, the very first being

Ceuta in 1415, and although they were all on the coast they seem to have been inspired, probably for defensive reasons, in the medieval walled towns of the interior of Portugal and not in the more «open» structure of the Atlantic islands. The «reunion» of the Muslim and Christian cultures, as mentioned in a previous chapter, would take place in these fortified towns, the most lasting and significant being the case of Mazagão (today El Jadida), which contains notable works of architecture and a highly developed urban structure (it was occupied by the Portuguese from 1515 to 1769). Mention must also be made of Safim, occupied from 1508 to 1542, Azamor (1513-1542) and Mogador (today Essaouira), a «jewel» of an off-shore island that was in Portuguese hands from 1506 to 1510.

— The West African coast from Mauritania to the Cape of Good Hope, where the Portuguese set up many settlements, which may be termed as proto-urban, as they made their way southward. These include the ones on off-shore islands (Goreia, Senegal), factories on the coast (Cacheu, Guinea-Bissau, which became a town in 1605, and São Jorge da Mina, Ghana, which became a town in 1486 and was occupied until 1637), off-shore archipelagos (São Tomé, which had a city of the same name by 1535, Santo António on the island of Príncipe, Fernando Pó), inviting bays (Luanda, founded in 1574) and rivers (S. Salvador, Congo). These were the models of fortified coastal cities that would be the mainstay of the Portuguese sea-borne commercial empire.

— The East African coast, where the settlements, which in practice belonged to the «State of India», closely followed the same above mentioned models. They were either towns built on off-shore islands (Mozambique, occupied from 1506 and containing clear analogies with the island of Diu in Guzarate, from where, in fact, the first stonemasons of Mozambique came) or fortified towns on the coast (Mombasa, Kenya, occupied from 1527 to 1698).

From the 18th Century: Transformation of a Model

The Evolution of the «Metropolis»

Although they showed neither the same vigour that they had possessed in the Middle Ages nor kept up with the growth rate of their colonial contemporaries, Portuguese towns of the Iberian Peninsula

did undergo some progress between the 16th and 18th centuries, especially in the land management of new urban centres or in the creation of small planned extensions.

This slow growth is understandable in the fact that the country had a small population and invested almost all its human resources in its overseas expansion and in the land management of its colonial areas.

With a phase of more pronounced growth in the 16th century, these towns had their extensions that were then started gradually occupied in the following period and up to the 18th century with successive architectonic contributions, initially Renaissance and then those under the influence of the Counter-Reformation and the Baroque ideals.

Urban works of great prestige left their stamp on three cities in particular: Évora, a city that King João III thought of making the capital of the country, with its remarkable 16th century aqueduct and respective network of fountains; Tomar, with grandiose works like the new square in front of the Church of S. João Batista at the time of King Manuel I and, later, the new cloisters of the Convento de Cristo; and Braga, with the initiative, between 1505 and 1532, of Dom Diogo de Sousa, who ordered the creation of the «campos» (urban squares outside the city walls) of Vinha, Carvalheiras and Santana, besides the largo (Square) Carlos Amarante, which would later be surrounded by enough public buildings such as churches, hospitals and convents to satisfy the needs of the city's expansion during the whole of the 19th century.

In general, towns of this time all over the country show signs of the 16th century, the «Rua Nova», the restored or rebuilt convent or the Misericórdias giving the main square a new physiognomy. Viana do Castelo, Oporto, Coimbra, Caldas da Rainha, Santarém and Tavira are some of these towns. Lisbon must also be included, as besides a large 16th century urban extension with a regular lay-out — Bairro Alto — a big riverside square with the royal palace and the customs house and the riverside area of Belém with its monastery and graceful military tower must also be noted.

Although gradually impoverished throughout the 17th century, which is reflected in the lack of urban vigour and the hypothetical European-style «Baroque» extensions then in fashion, the country did strengthen a series of towns with notable networks of walls and bulwarks as result of the War of Independence against Spain from

1640 to 1668 and others that followed it in this period of great upheaval.

Elvas, with fortifications built by Rui Correia Lucas and others as from 1643, and Estremoz, surrounded by «Vauban-style» walls from the end of the 17th century, can be pointed out in the Alentejo, Almeida, with its «star-shaped» walls, some erected in the 18th century, in the Beiras, and Valença in the Minho, interestingly having two nucleus linked by a bridge. Although of less importance, other fortified towns can be referred to, from Olivença, which was annexed by Spain in 1801, to the coastal town of Setúbal, fortified in the 17th century.

One thing that must be noticed here is the importance the «Classes of Fortifications», created by the King in 1647, must have had, as did the work of Serrão Pimentel entitled «Método Lusitânico de Fortificar as Praças Regulares e Irregulares» (The Portuguese Method of Fortifying Regular and Irregular Strongholds) at the same time and, in the 18th century, that of Azevedo Fortes and his «Engenheiro Português» (The Portuguese Engineer) and Manuel da Maia.

Signs of Change

Political stability finally returned to the country at the end of the 17th century, during the reign of King Pedro II. A new impulse was given to the colonization of Brazil at the same time, which in turn gradually gave rise to a new growth of urbanism that used different ideas and themes. Preparing the ground for the 18th century Joanine and Pombaline phases of a Europeanised and enlightened physiognomy, a transformation of the traditional Portuguese city would be started here. It would gradually lose its character and give way to a type of hinterland town, with the clearing of land or control of territory and the urge to explore in both the mother-country and in the colonies. A rigid geometric structure, spreading out from the «founding square» and with a regular lay-out became more common. It is also a sign that international urban themes of a classical physiognomy asserted their influence on the former «riverside-landscape» pattern, which obviously tried to blend in with the new trends, thus sometimes creating «synthesized» urban situations, as will be seen.

A traditionalist attitude asserted itself in the transatlantic urban areas of Brazil in the middle of the 17th century, following the expulsion

of the Dutch invaders. More importance was given to the public places that already existed in the main colonial towns and big buildings were systematically restored. This happened in Recife (Jesuit church, 1686-1690), Rio de Janeiro (São Bento, 1668) and, above all, in Salvador da Bahia, where notable buildings like the Jesuit church (between 1654 and 1694), which is today the Cathedral, and the former Cathedral (1660-1674) were reconstructed. The same thing happened in one of the few possessions that were left in India, namely Old Goa, with the reconstruction of the Church of São Francisco (1668) and the building of São Caetano (1656-1661). At the end of the same century, some new pioneer towns were founded in a fresh impetus of expansionism in America, such as the colony of Sacramento on the River Plate in Uruguay in 1680, built with a regularly-out. The most important events in Portugal were the failures to lay-out a new «main square» in Oporto in 1687 (and again in 1715 on the initiative of Dom Tomás de Almeida) and to introduce a «monumental and landscaped» Baroque architecture with urban impact into Lisbon through the construction of the Church of Santa Engrácia from 1681.

The Joanine-Pombaline Period

A «modern», urban and global understanding of 18th century Lisbon began with King João V (1706-1750), who tried to attenuate the old problems and the new anxieties of the city through the construction of the remarkable Aqueduct of Free Waters (Águas Livres), with its arches spanning the Valley of Alcântara, its monumental arch at Amoreiras, its gigantic reservoir (Mãe D'Água) at Rato, its branches of São Bento and Necessidades and its network of fountains, such as the ones of Rato and Santos.

Reference must be made here to the isolated complex of Santo Antão do Tojal (1728-1732), the residence of the Patriarch in the suburbs of Lisbon. It was designed in Italian style by Canevari and was made up of the residence, fountains, aqueduct, church and its facade overlooking a square — a perfect example, in its simplest form, of the crucial themes of Roman Baroque with its pre-urban stamp.

Although being restricted to Lisbon, as far as public works were concerned, and within a certain architectonic dimension (the new Opera attached to the Royal Palace) or projects (a new Patriarchate), the outstanding event of King João V's reign in terms of urban symbolism is the gigantic Monastery of Mafra, a type of Escorial in the suburbs of the capital that gave rise to a new town that grew up around it, a network of streets somewhat similar to a Roman trident. This symbolic dimension would only happen once more — out of date and never completed — with the construction of the neo-classic-style *Manique do Intendente* near Santarém, which was an «ideal settlement» comprising a hexagonal square, church and palace and left incompleted by Pina Manique, the Chief of Police at the time of Queen Maria I (1794-1807).

Following the Joanine period, without any break in the evolution of the urban ideal but already with a dimension of collective utility and backed up by theoretical techniques, came the Pombaline period (1750-1775) during the reign of King José. This brought the notable reconstruction of Lisbon after the earthquake of 1755 — the «Downtown», with its appropriate «main square» facing the river and being a continuation of the former *Terreiro do Paço* (Palace Courtyard and riverside main square) — a plan for an innovative industrial complex alongside the water works at Amoreiras, also in the capital, and the incentive for the industrialization of Covilhã in the northern interior of the country.

In Oporto, under the direction of the *Almadas* and supported by Pombal, a grid of rectilinear streets giving on to the traditional centre, in this case the *Rua de São João*, was planned in 1757 (the «main square» system had failed in this city earlier, as has already been mentioned). And the English-influenced Neo-Classic *Praça da Ribeira* (Riverside Square) was laid out in 1765, in a city where not long before, above all between 1732 and 1749, the architecture of Nasoni, whose Baroque church towers changed the profile of the city, had reigned supreme.

In the rest of Portugal, small towns with the dual aim of controlling and peopling the border areas, like Vila Real de Santo António in the Algarve, founded in 1774, or supporting the local economy, such as the fishing towns of Olhão in the Algarve and Porto Covo in the Alentejo, are rigidly laid out in a geometrical blocks grouped around a central square. The post-earthquake reconstruction carried out in Setúbal and Nazaré completes the «global view» of the occupation

and management of the territory, a subject that was so dear to the enlightened thinkers of the time.

A clear intention to continue with an up-to-date and well-conceived urban programme in the colonies could also be seen in the Joanine-Pombaline period, especially in Brazil. This is proved by the royal decrees issued at the time and by the plans that are known, all of them having a rigorous, geometric physiognomy.

The following towns in the «sertão» interior that were founded in this period can be mentioned: Vila Boa de Goiás, (1739) by royal decree of 1736; Mariana in Minas Gerais, (1745) following the plans of Brigadier Alpoim; Vila Bela da Santíssima Trindade in Mato Grosso, (1752 or 1757) by royal decree of 1746; Vila Nova de São José in Rio Negro, by royal decree of 1755; Oeiras in Piauí, by royal decree of 1761. In the area of the Amazons, Nova Mazagão in Pará was built in 1770 to settle the people coming from Mazagão in Morocco following the plan of Inácio Mariz Sarmento.

When Sacramento in the south of Brazil was threatened it became urgent to halt the advance of the Spanish colonisers. Several towns were built with this aim in mind, among them being Desterro, today Florianópolis in Santa Catarina, constructed between 1747 and 1752, Laguna, of an uncertain date, São Pedro do Rio Grande, founded in 1747 and consolidated from 1752-1755, and Porto Alegre, the present capital of the state of Rio Grande, which was founded in 1743 and restructured in 1772.

In all these cases, the respective decree refers to the creation of a «square» and its respective rectilinear streets. In regard to the south of Brazil, the Royal Decree of 9th August 1747 declares that «[...] a square measuring five hundred palms (22 centimetres or 8 inches) on each side will be laid out, and a church will be placed on one side, the street or streets will be marked out with the same width of at least forty palms, and along them and on the sides of the square houses will be built in good order [...]», thus confirming the search for geometric rigour and a clear centralising conception of the urban centre.

Not all new towns, of course, were built according to this plan and there were still some that grew up spontaneously. In many respects, Ouro Preto revived the linear model of the «main street», laid out on the hills and valleys of the Minas Gerais hinterland. But even there, a regular-shaped central square, the centre of administrative and military power, seems to be an attempt to strengthen the main centre of the town.

In the other possessions that were less important than Brazil, an effort at urbanization was at least made in Angola and Goa. In the former, Novo Redondo, founded in 1769 and restructured in regular blocks in 1785, Benguela, refounded by Sousa Coutinho between 1764 and 1772, and the unsuccessful construction of the Nova Oeiras Foundry near Luanda at the same time can be referred to. In the latter, Pombal attempted the «impossible» reconstruction of the ruined Old Goa between 1774 and 1777, with plans that were never carried out, and the setting up of New Goa — Pangim, with a plan that was made in 1776 but only put into operation in the 19th century.

The Portuguese City of the 19th and 20th Centuries

Being on the outskirts of the general, accelerated growth of European cities in line with the equally accelerated industrialization of the first half of the 19th century, Portuguese cities underwent a very slow transformation during the same period, due to a succession of political crises and the resulting instability. The initial growth was seen around the first industrial agglomerations, usually in valleys and alongside the waterways, and in the humble landscaping of and the planting of trees in the old squares.

As in most things in Portugal, Lisbon was in the forefront in the development of industrial areas, mainly in Alcântara and Chelas. This gave rise to an urban proletariat that would little by little settle and construct popular quarters in the above mentioned valleys. At the same time, the defining of a «bourgeoisie image» in the capital's former public places led to their being planted with trees and landscaped with gardens. The most outstanding examples of this was the Passeio Público (Public Promenade) near Rossio, which had been started in 1764 and was a kind of fenced-off avenue used by the Court in the first half of the 19th century, and the garden of São Pedro de Alcântara, a hillside platform alongside the old «Bairro Alto» that was landscaped in 1839 and which demonstrated that, despite all the signs of change, the centre of the city continued to be Chiado and the Downtown.

This centre, meanwhile, built on the orders of Pombal after the 1755 earthquake, would open the way to a geometric and potential

urban expansion to the plains to the north of the city and in the middle of the century Lisbon «hesitated» between continuing its traditional link to the River Tagus and its secular riverside «spirit» (the embankment between Cais do Sodré and Santos, built in 1860, could have allowed the construction of a new «Boavista residential quarter» along the river bank) and a more «European» growth by spreading out to the vast open spaces away from the water.

The experiments of the time were the launching of new extensions that were limited in area and in the possibilities of growth, like the «chequered» quarters of Campo de Ourique (1878, 1906) and Estefânea (1880).

The city decidedly opted for the latter choice, with the northward opening of the Parisian boulevard-style Avenida da Liberdade in 1879. This was continued by the huge, flat extension of the New Avenues (1888-1910), planned by Ressano Garcia, which still today is the main business area of the capital. A very functional and practical decision reserved the whole of the river bank for a modern port and industrial area. The reverse side of the coin of this expansion was housing for the working classes. It was first grouped around the «patios» of old palaces and later in residential quarters built by private initiative and segregated from the general urban fabric, such as the «islands» of Oporto.

Thus, the 18th century mercantile premisses and the old tradition of a mariners'town would be replaced, both in Lisbon and in other Portuguese towns, by the new capitalist and liberal vigour of the 19th century. This change was imposed by an industrial Europe and was confirmed in urbanistic terms by the application of plans for reticulate and functional extensions that could be reached by the new means of transport, first the train and then the tram.

The planning of grids adapted to the mechanical transport networks and laid out in monotonous and endless rectilinear blocks happened in some of the smaller cities of the country after, or even at the same time as, Lisbon, often repetitively and, at times, limited, with only one long, straight avenue. Good examples of this are the Avenida da Boavista in Oporto and Avenida dos Combatentes in Braga. The rapid growth of small provincial cities thanks to the railway was common at the time. The railway station was always a long way out of town and the two were linked by means of a long avenue, which often gave rise to a small roadside

grid of houses. Typical examples of this are the ones of Viana do Castelo (Av. dos Combatentes), Figueira da Foz (Rua da República and Bairro do Norte) and Aveiro (Avenida Central).

Very few new towns were founded in Portugal during this period. A certain poverty can be noted throughout the century, which resulted in a weak growth, a dependence on other nations and the country assuming a secondary economic role in relation to the countries of North and Central Europe. Espinho, an extensive, monotonous grid in the suburbs of Oporto, is a planned example of this. A seaside resort, it became a municipality in 1899 and, although on the coast, represents the definite abandonment of the traditionally intimate and «landscaped» Portuguese urban centre.

The international-pattern grid, merely functional and lacking formal pretensions, was the system adopted in the colonies at the end of the century whenever the foundation of a new city or the expansion of an existing one was envisaged. Mention can be made of Mindelo on the island of São Vicente (1858), the desired new capital of Cape Verde, Praia on Santiago, also in Cape Verde (1882), Bissau in Guinea, planned in 1919 by José Guedes Quinhones, Moçâmedes in Angola (1880), Beira and Quelimane in Mozambique, Pangim, New Goa, and Vasco da Gama, Mormugão, an Indian industrial port under Portuguese administration, and in Macao, a planned extension branching off Avenida Almeida Ribeiro (1910). But the most interesting case of all, owing to its dimension and equilibrium, was Lourenço Marques (today Maputo) in Mozambique, a vast regular grid that transformed the former prison colony into the capital of the colony and even today is almost the whole of the city. It was planned by António José de Araújo in 1887.

Following the crisis of the first quarter of the 20th century, with the implantation of the republic in 1910 and the first World War, and from the beginning of the authoritarian government of the «New State», there was a speculative growth of middle class residential areas in Lisbon, served by a fairly modern and conventional architecture (Bairro das Colónias and Bairro Azul in the 30's) and lacking general planning. This was only undertaken with Duarte Pacheco, Minister for Public Works and Mayor of Lisbon from 1932 to 1943, who started the modern phase of urban planning, backed up by systematic legislation and appropriate official organisms.

Based on the idea of the «garden-city», some residential areas for the lower classes, which were never really integrated into the fabric of the city and were little more than ghettos, were constructed. Alvito (1938) and Encarnação (1948) by Paulino Montez are examples of this.

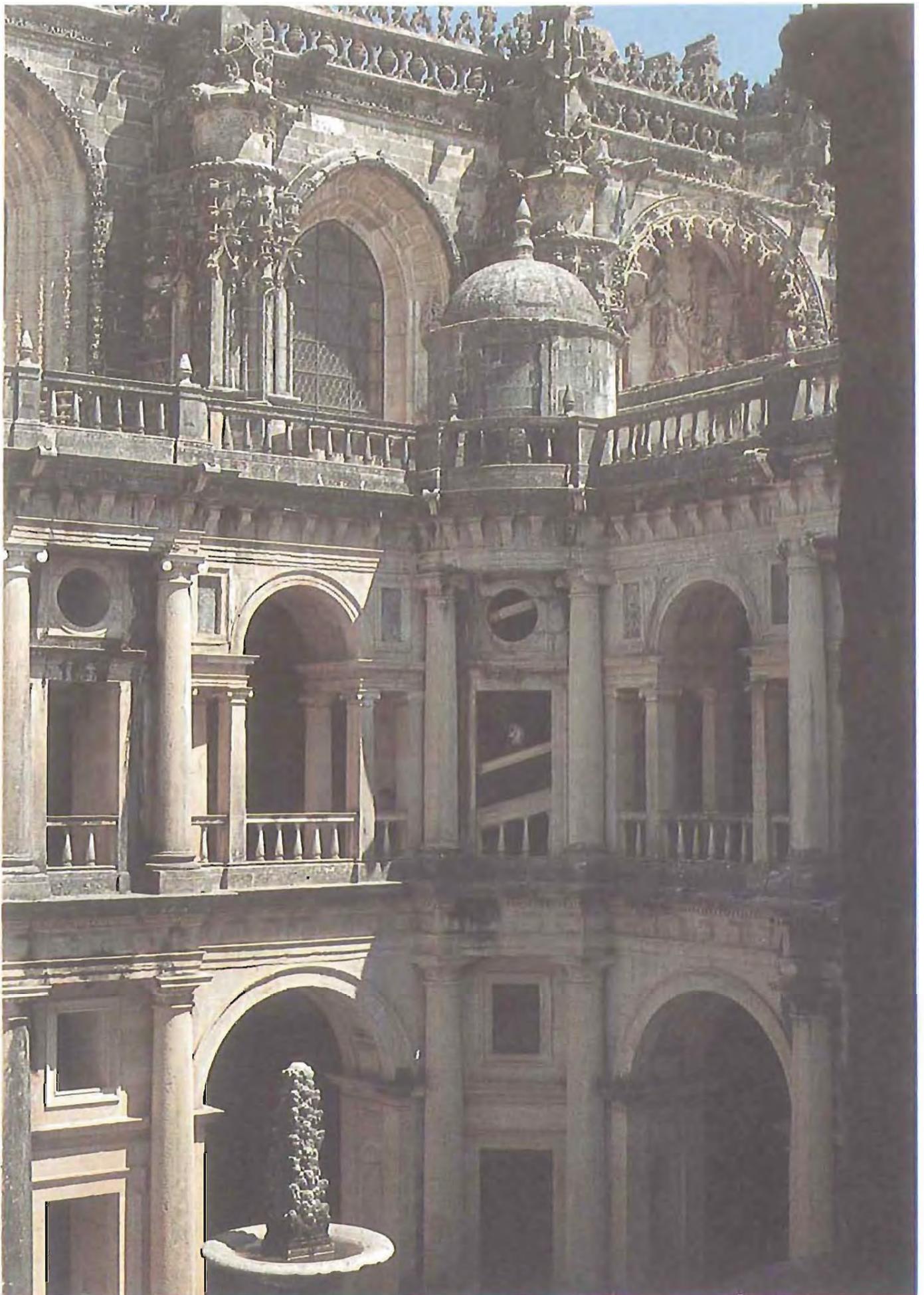
The «Lisbon Urbanization Plan» (1938-1948), which confirmed the theoretical and technical influence of the French expression in Portugal at the time, was drawn up by the urbanist De Groer, who continued the work started by Alfred Agache in the 20's. Inspired in a tradition of eclectic urbanism between the academic monumental design and the theories of the lay-out of the Saxon «garden-city», the plan gave Lisbon the dimension, transport system and public works that still define its physiomy today — motorways, the university city, areas expropriated of state social housing schemes, parks and the airport. Thanks to the strenght and ability of the government of the time, the plan was applied fairly systematically and rapidly. Special reference must be made to the parcial plans for Restelo and, above all, for Alvalade by Faria da Costa, the first Portuguese urbanist. Their building began in 1948 and continued throughout the 50's, demonstrating a notable balance between the ideals of cellular zoning (with the «neighbouring units») and articulation with the «city of blocks» that had been built in the areas of the avenues of the 1900's.

In the period between the end of the 30's and the middle of the 50's, the number of urbanization plans executed was remarkable, both in almost all of the cities and towns of Portugal and in the colonial urban centres, through the Overseas Urbanization Office, of the Atlantic islands, Africa, India, Macao and Timor. In some cases, however, these plans were not put into practice. After the 2nd World War and throughout the 60's and 70's, the general trend in the big cities was, as in the rest of Europe, to apply the new concepts of international urbanism inspired in the «Carter of Athens» of the so-called «Modern Movement». This implied the construction of individual high-rise blocks supported on a system of pillars, with intermediate greens spaces and a separation of traffic and pedestrians. In short, a watered down and fragmented city. This type of land management was adopted for Olivais (1959), Chelas (the 60's) and Telheiras (the 70's) in Lisbon — some of them are still under construction — as well as for zones in the suburbs of the capital, like Nova Oeiras in the 50's, in Oporto (Ramalde and Pasteleira) and other

towns of the provinces. So, by the inevitable adoption of an improved «European» model, Portuguese towns moved even farther away from the traditional riverside urban centre, a move that was confirmed and accentuated by the vast suburban growth from the 50's to the 80's that created the «Metropolitan Areas» of Lisbon and Oporto, a growth that was a general worldwide phenomenon.

The change to this «large scale» urban scheme, however, has led to a global rethinking of the city since the 80's. There is a trend towards the enhancement and recovery of the old historic quarters of cities, such as Alfama, Mouraria and Bairro Alto in Lisbon, the riverside areas of coastal cities like Lisbon, Oporto, Viana do Castelo and Tavira and the rise of the cultural importance of the centre of the capital with Siza Vieira's plan for the recovery of Chiado, which will give it a new international dimension and a new belief in the functions of the capital.

PLATES



1. Convent of Christ in Tomar: the cloister of Dom João III, or of «the Filipes» (1557-1562), mannerist work by Diogo de Torralva, attached to the body of the Manueline church (1510-11), by Diogo de Arruda, which incorporated the medieval *charola*, an octagonal chapel: example of the conjugation of distinct and contradictory styles, within the traditionalist, integrative sensibility of Portuguese architecture.

Constants and Characteristics



2. *Conventinho* («Little Convent») of Valverde, in the environs of Évora, from approximately 1550-1560 (in the foreground, a school by Manuel Tainha, from the 1960s): simplicity, rurality, landscape sensibility.

3. Church of São Paulo, Macau, China (1602-1626): classical patterns filled out by Japanese artists, or the eclectic sensibility and absorptive capacity of Portuguese architecture.





4. Chapel of Senhora da Rocha, Armção de Pêra, the Algarve: fruit of the *Moçárabe* (Moslem — dominated Spanish) tradition, derived from the Visigothic, Moslem and Christian influences worked out over the course of the Middle Ages.

5. Church in the northern village of Covas do Barroso, region of Trás-os-Montes: the Portuguese Romanesque, rural, simple, small-scale.





6. Church of Graça, in Santarém, from the mid-15th Century: the spread of the Gothic thematic, within the «Batalha cycle», originated by the church of St. Maria da Vitória, in Batalha.



7. Penedono Castle, Beira: small fortification reconstructed in the 15th Century: the difficult setting of the Portuguese interior.



8. Mother church of Mértola, the Alentejo: over the interior of a Moslem mosque (from the end of the 12th Century), the gracious decorative grammar of the Manueline (remodeled at the beginning of the 16th Century).

9. Hill chapel in São Tomé de Meliapor, in the environs of Madrastra: the same Manueline presence, in a 16th-Century Indian sanctuary (1547, altered in the 18th Century).





10. Mother church of Ribeira Grande, São Miguel Island, the Azores: the «Atlantic Baroque», regional, decorative, basaltic and rough, from the mid-17th Century.



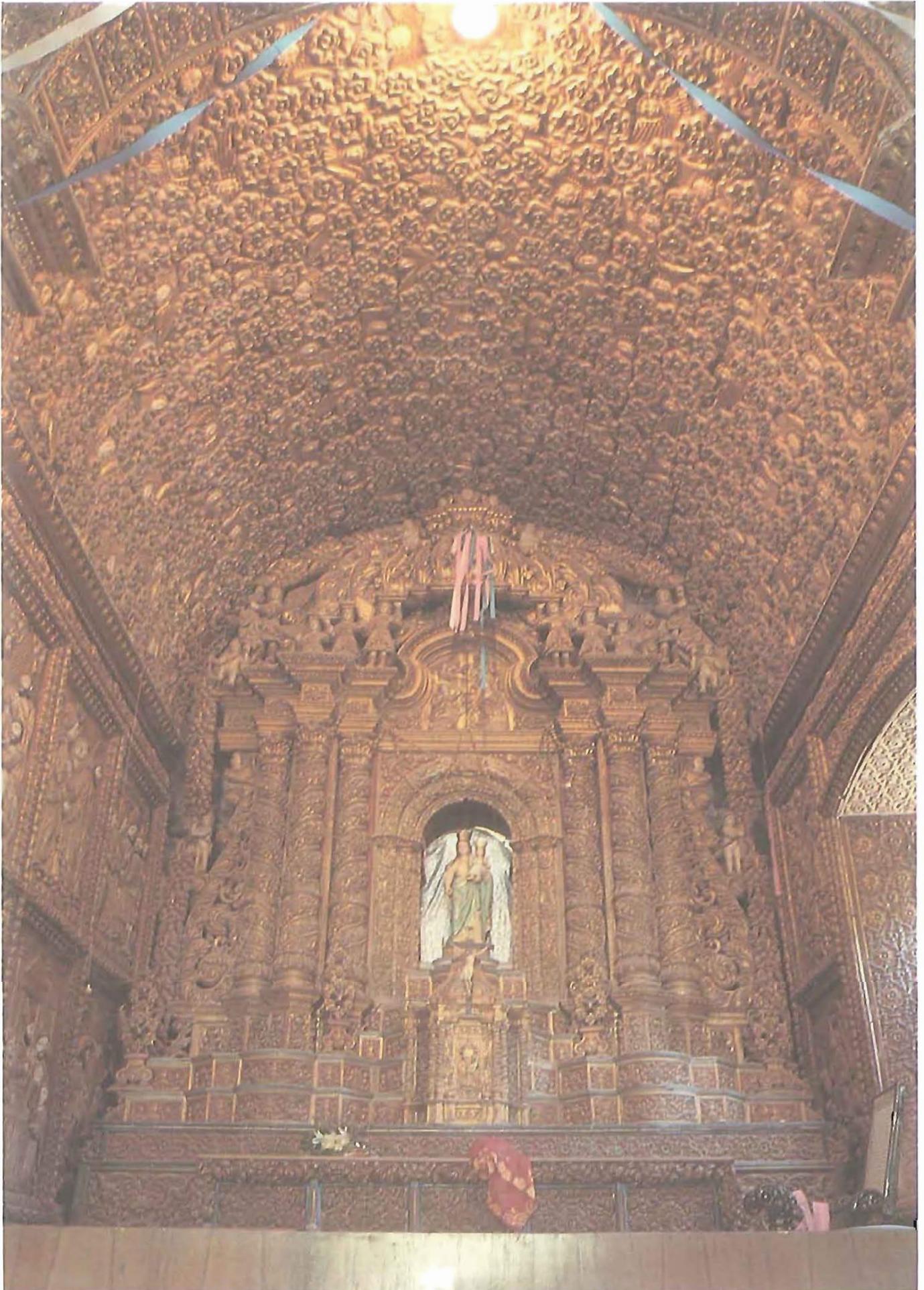
11. Façade of the church of the Jesuit College in Baçaim, environs of Bombay, India (from 1636): the classical tradition of *chão* («plain, unadorned») architecture, with yearnings for monumentality.



12. Façade of the Jesuit church of Diu, in the Guzarate, India (constructed in 1601 by Gaspar Soares): whitewash and colour.

13. Church of São Francisco, Diu, in the Guzarate, India: the austere Franciscan image of the triple-arched porticos in a Hindu context.





14. High Altar of the Church of Mãe de Deus, in Damão-Praça, in the environs of Bombay: gold engraving with Indo-Portuguese inspiration.



15. Church of the Espírito Santo and monumental stone cross in Margão, Salsete, Goa: perhaps best described as «Indo-Portuguese *chão* architecture».

16. Mother church of Nossa Senhora do Rosário, Cachoeira, environs of Salvador da Bahia: the *chão* design of Northeast Brazil, at the turn of the 18th Century (1693-1747).





21. «Água de Peixes» manor house, in the environs of Alvito, in Alentejo (late 15th century): the manueline style in domestic architecture, or an initial portuguese «renaissance» — root style, with mudéjar (dominated moslem) inspiration.

22. «Cloister of the Gerais», University of Évora (1566-74, by Manuel Pires, António and Afonso Álvares, altered in the 18th Century).





23. Necessidades Manor House, Livramento, São Miguel Island (18th Century): the rural Atlantic «farmhouse», from the era of Dom João V and Brazilian gold.

24. «Casa Grande» of the Freguesia plantation (mid-18th Century), overlooking the bay of Todos-os-Santos, near Salvador, Brazil: the Portuguese «farmhouse» as headquarters of the sugar business.

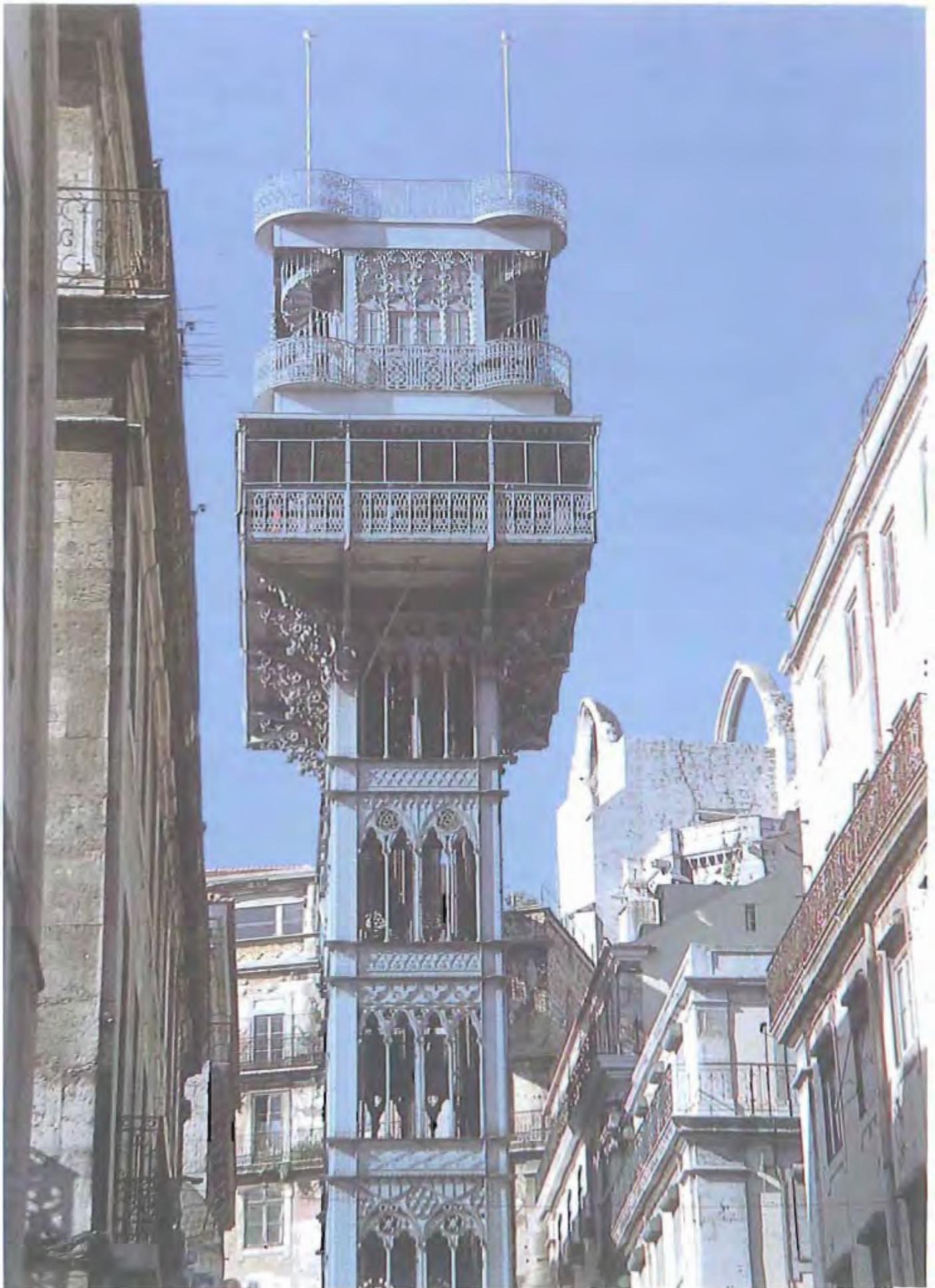




25. Neo-Manueline railed window in the Palace-Hotel of Buçaco (1888-1907, by Luigi Manini), near Coimbra: the most characteristic Portuguese romantic revivalism.

26. Atrium of a residence in Aveiro, with tiles, iron, and Art Nouveau-influenced furniture: European models in Portuguese architecture.



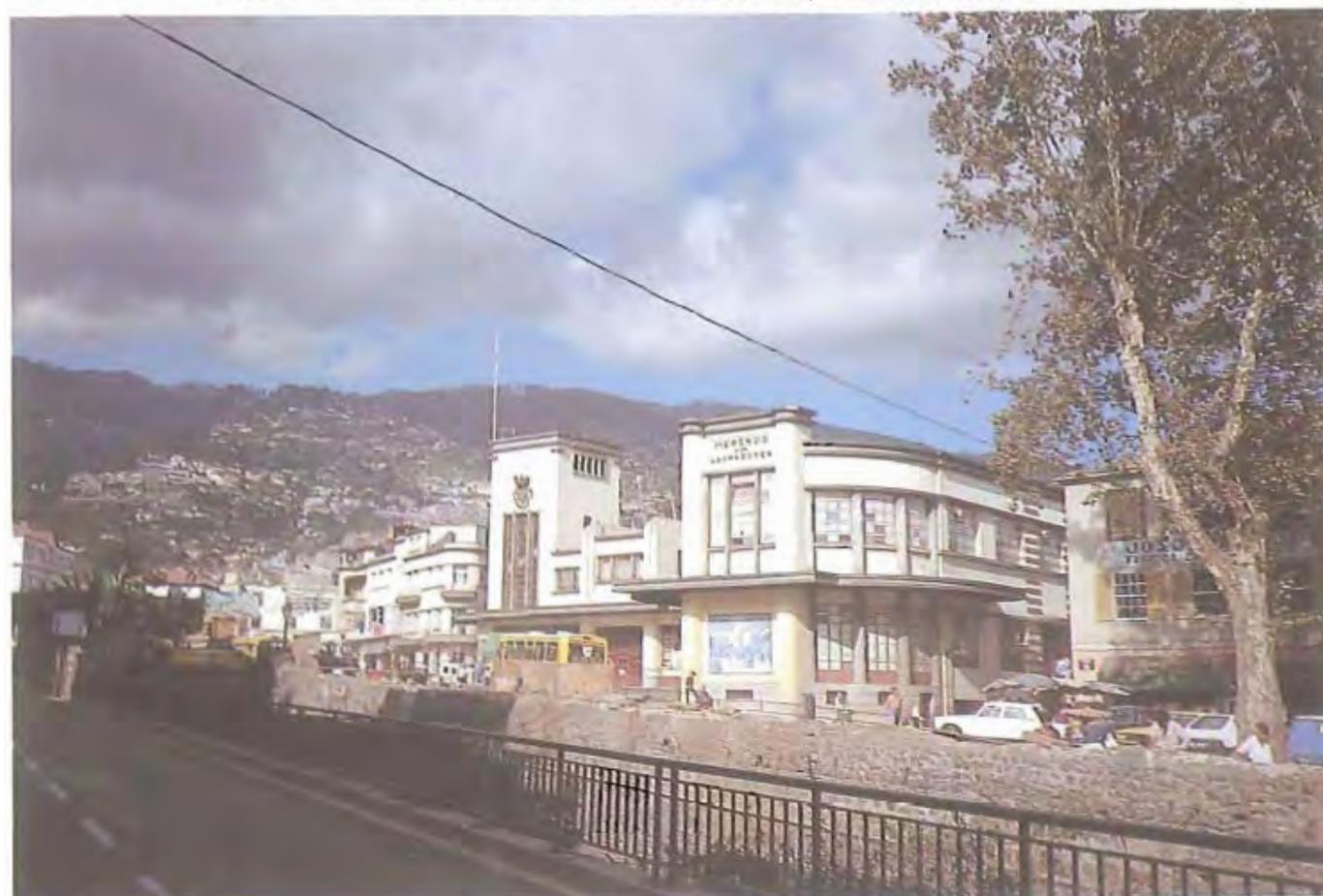


27. Elevador of Santa Justa (1902, by Raul Mesnier du Ponsard), in downtown Lisbon: industrial «iron architecture» at the service of the Lusitanian «city of hills».



28. «Vila Bertha» (1902-1908, by Joaquim Tojal), a residential housing block in Lisbon: iron and brick at the service of proto-modern urban programmes.

29. «Farmers' Market», in Funchal, Madeira Island (1940, by Edmundo Tavares): modernist architecture in the early days of reinforced concrete influences city modernization.





30. *Pousada* («Inn») of Valença, in the Minho (1950s, by João Andresen): modern architecture inspired in the models and materials of the vernacular tradition.

31. Pavilion of the Architecture School in Oporto (1987, by Siza Vieira): purist design, stripped down and abstract, a symbolic image of the architecture of today — and the future.





32. Façade of the church of the Jerónimos, in Belém, Lisbon (begun in 1498-1500, by Diogo Boytac, continued by João de Castilho and Diogo de Torralva): the masterpiece of the Manueline.



33. Terreiro do Paço (by Eugénio dos Santos and Carlos Mardel), the royal plaza integrated into the Lisbon's new downtown after the 1755 earthquake: the *chão* sensibility revisited by the Portuguese iluminismo (enlightenment).
34. The arcade of the Aqueduct of Aguas Livres, Alcântara, Lisbon (1729-48, by Manuel da Maia, Custódio Vieira and others): the grandiose dimensions of Dom João V's public works.





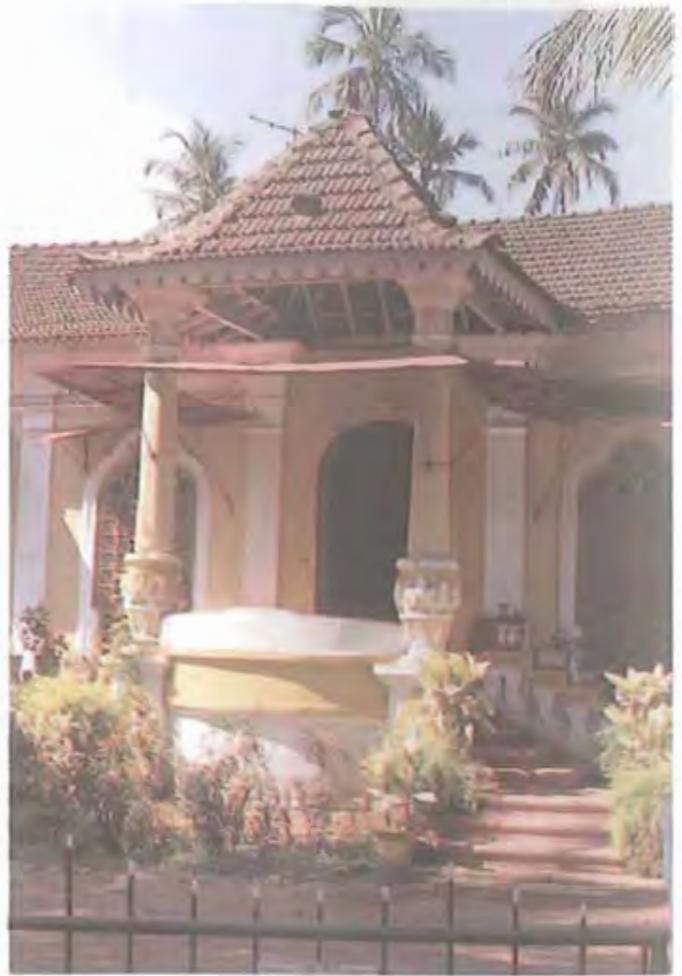
35. Church of Santa Engrácia (now the National Pantheon) (1681-1712 by João Antunes): the fusion of «Roman-style» Baroque dynamism with the traditionally national «carrure».



36. Detail of the façade of the Éden Cinema, Lisbon (Cassiano Branco and Carlos Dias, 1931): between Art Deco and Futurism, the city's greatest modernist work.



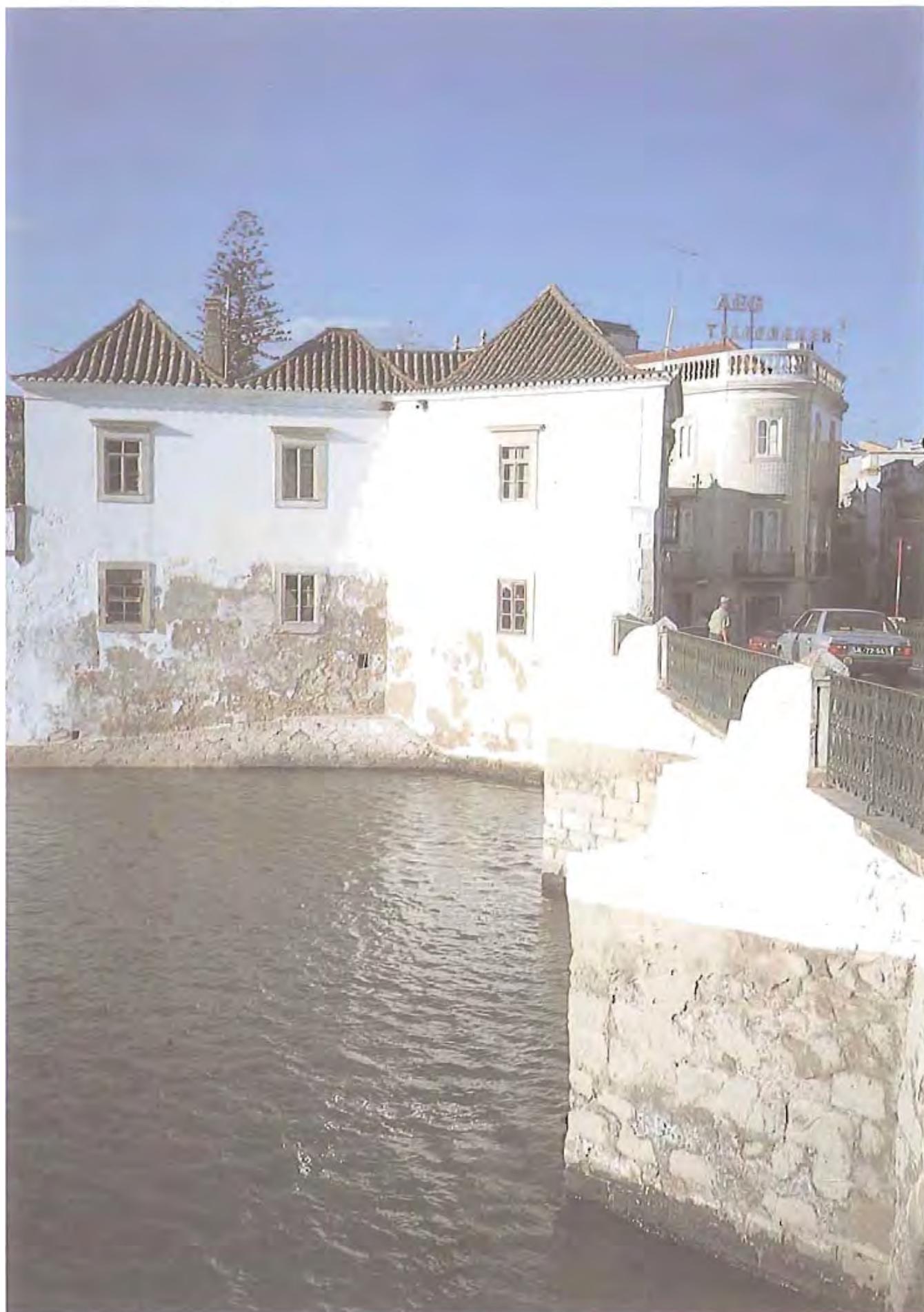
37. «Empire of the Holy Spirit», Terceira Island, the Azores: a small altar-temple for festive rituals, of medieval origin but still alive on the «Atlantic Islands».



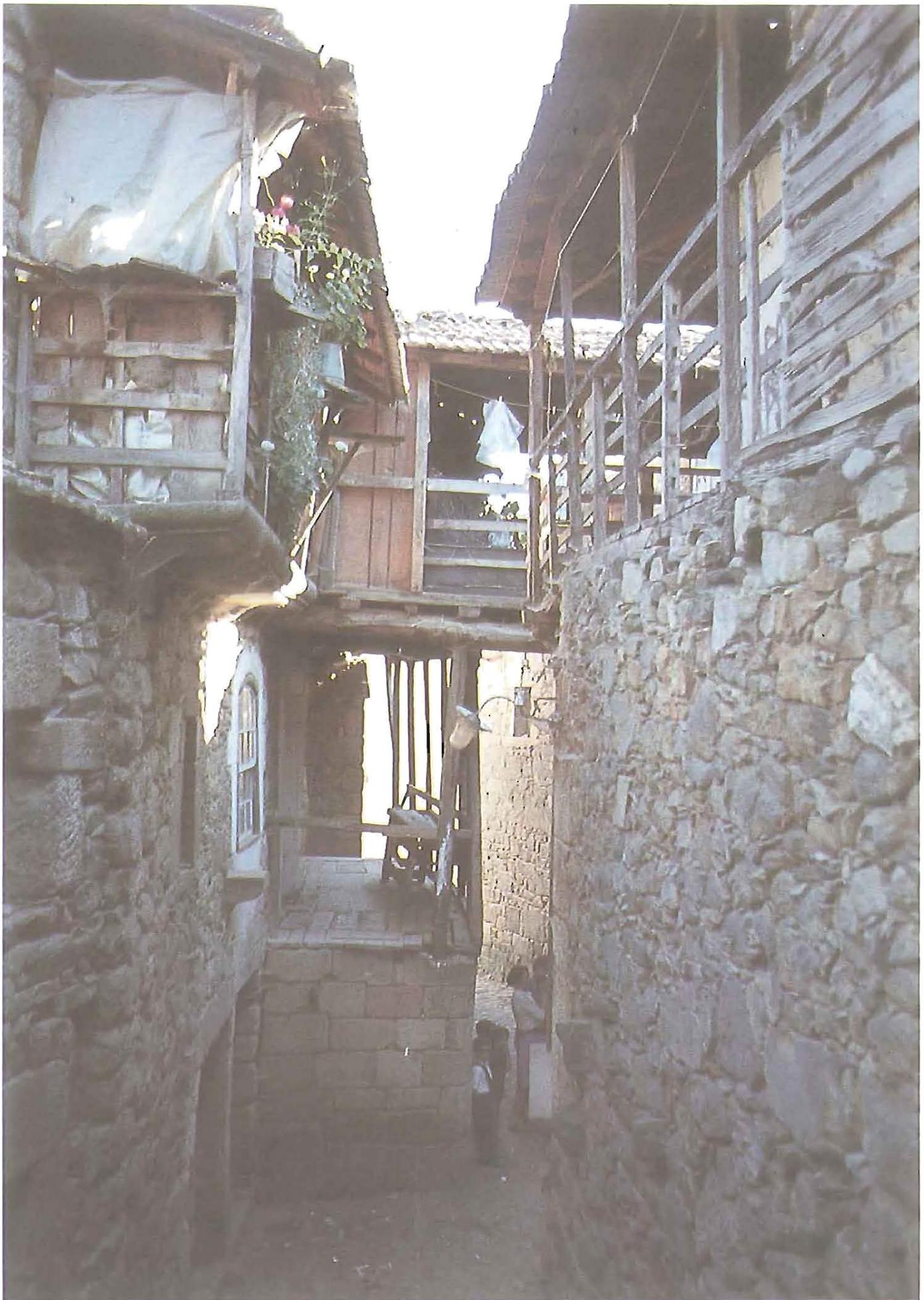
38.
«Balcony» of a Goa-style house
(in Santa Cruz),
probably an evolution
from the Portuguese manerial
varanda in India.



39.
Wooden varanda
at the rear of a dwelling,
Alcântara, Maranhão, Brazil:
the back yard
adapted to the tropics.



40. House with «multiple», «trussed» roof tiles, in Tavira, in the Algarve: the meridional house, of whitewashed masonry, with oriental overtones.



41. Rural aggregation in Salzedas, near Lamego: structures surrounding patios, connected to each other by «bridges» (galleries): the northern house, stone and wood.

The Portuguese City



42. Mértola, adjacent to the Guadiana River: evidence of an urban tradition implanted beginning with the Romans and extended by the Moslems, strongest in the south of the country.

43. Lisbon, «blueprint» for the genesis of overseas Portuguese cities: the riverfront model, on the banks of the Tagus, among hills and valleys, creating «heights» and «downtowns».





44. Tomar, in the Ribatejo: the most exemplary geometric city, following the medieval, Templar model, spreading from the castle down to the banks of the Nabão River .

45. Angra do Heroísmo, city on Terceira Island, the Azores: founded in the 15th Century, with a planned, geometric extension from the 16th; a typical transatlantic commercial settlement .



The Portuguese City



46. Óbidos, medieval walled town: the layout dictated by a *rua direita* («main street») and squares, typical of Portuguese urban style, and subsequently transposed overseas.

47. Tavira, medieval city that «sought the sea», spreading out from the waterfront «downton», as a consequence of the Portuguese discoveries.





48. Olinda, in the Pernambuco, Brazil: 15th-Century city, agrarian and «organic», whose structure, among hills and valleys, calls to mind that of the city of Goa.

49. «Vila Rica» in Ouro Preto, Minas Gerais, Brazil: founded almost spontaneously by explorers for gold in the 18th Century, it took its layout from the style of the northern cities of Portugal.





50. Walls of Chaul, near Bombay, India: founded in the 15th Century, originally Moslem, it was a typical fortified spice-and-commerce post of the «Northern Provinces».

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