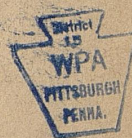
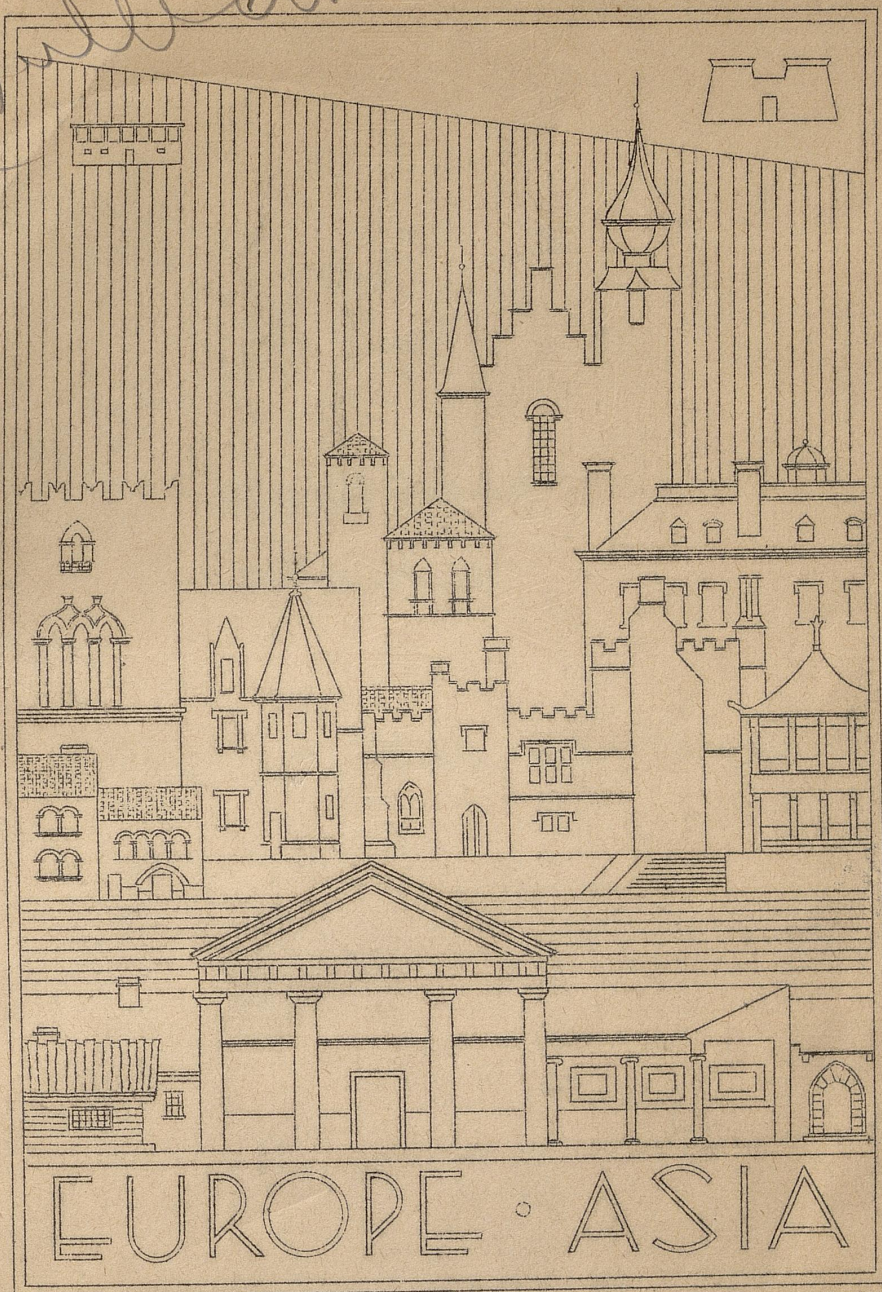


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HISTORY OF THE HOME IN EUROPE AND ASIA

Museum Extension Project

HISTORY OF THE HOME



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THE HISTORY OF THE HOME

in Europe and Asia

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Gen. Crypt

PRE-HISTORIC SHELTER

From the earliest times the first requirement for the maintenance of life in the human species was food. The second, which was necessary for protection from the elements, for defense from enemies and beasts, and as a nucleus for the development of the family, was shelter. It is with the second requisite, shelter, that we are concerned in tracing the history of the home.

Man as an animal with at least rudimentary brain capacity, walking upright, found shelter like other beasts in natural features such as the cave. With this he was content until such time as increase in population, the gregarious instinct, and the necessity for warm, dry habitations impelled the erection of artificial or man-made structures. One notes in these the influence of climate upon the materials employed, upon the plan, and upon the architecture of the exterior. Where wood was scarce stone and sun-dried clay were used. In tropical climates the plan was open, made for outdoor living, with flat roofs used as terraces. As one goes north toward the Arctic regions the roof becomes steeper in pitch, enclosing walls must be better constructed for keeping out cold, and the importance of the fireplace as a means of warmth increases.

At first our ancestors used only primary tools, such as axes with heads of stone or flint gathered at random and employed in their original form. The development of secondary tools, or those made from materials found in flint mines, increased their abilities and gave incentive toward the fabrication or working of those materials of which their habitations were constructed.

Environment, mental development, and skill in craftsmanship have therefore all contributed toward the development of domestic housing from the day when the first rude lean-to was erected up to the present time.

As a natural corollary to the discussion of shelter, it is necessary to consider the development of man himself in the pre-historic period. Man, as we know him today, is the result of a long evolutionary process: a process which has taken more than a million years. The body of present day man contains many survivals of previous and lower stages in his evolution; muscles and organs which are no longer used and even the remains of a tail. Sufficient scientific data now exists to prove that the human animal was once quite different from what he is now.

It is hardly our province to look into the geological history of the pre-historic period (which is so important in determining the time when important changes occurred in the earth's surface) but we must mention the Tertiary period which dates beyond 1,000,000 B. C., because it is in that era that we find the first evidences of a primitive type of man. Excavations which have been conducted by geologists and paleontologists in various parts of the world have revealed fossils which mark stages in human development. The scientist is able to date these finds roughly by a consideration of the age of the geological strata in which they were found. There is not, however, sufficient evidence to formulate a complete history of human development, and even the ancestral human type has not, as yet, been found. Fossils (very fragmentary) have been found in India and Austria which indicate a type of being anterior and ancestral to man and the apes.

It is generally granted that the oldest human fossil which has as yet been found is that discovered in 1901 in Java. It consists of a part of a skull with a small brain case and semi-human teeth which would indicate that the being (known as *Pithecanthropus Erectus* or the erect ape man) chewed as human beings chew, - with a rotary motion. These remains undoubtedly belong to the late Pliocene (the last upper subdivision of the Tertiary period) or the early Pleistocene period, the lowest classification of the Quaternary epoch which corresponds to the Eolithic class of the prehistoric nomenclature. Remains have also been found in China in 1927 and at Heidelberg in 1907 - the latter shows a definite advance in the type of skull and jaw. According to the chart both *Pithecanthropus Erectus* and the Heidelberg man were off-shoots of the Neanderthaloid branch which is a parallel development to the strain of *Homo Sapiens*.

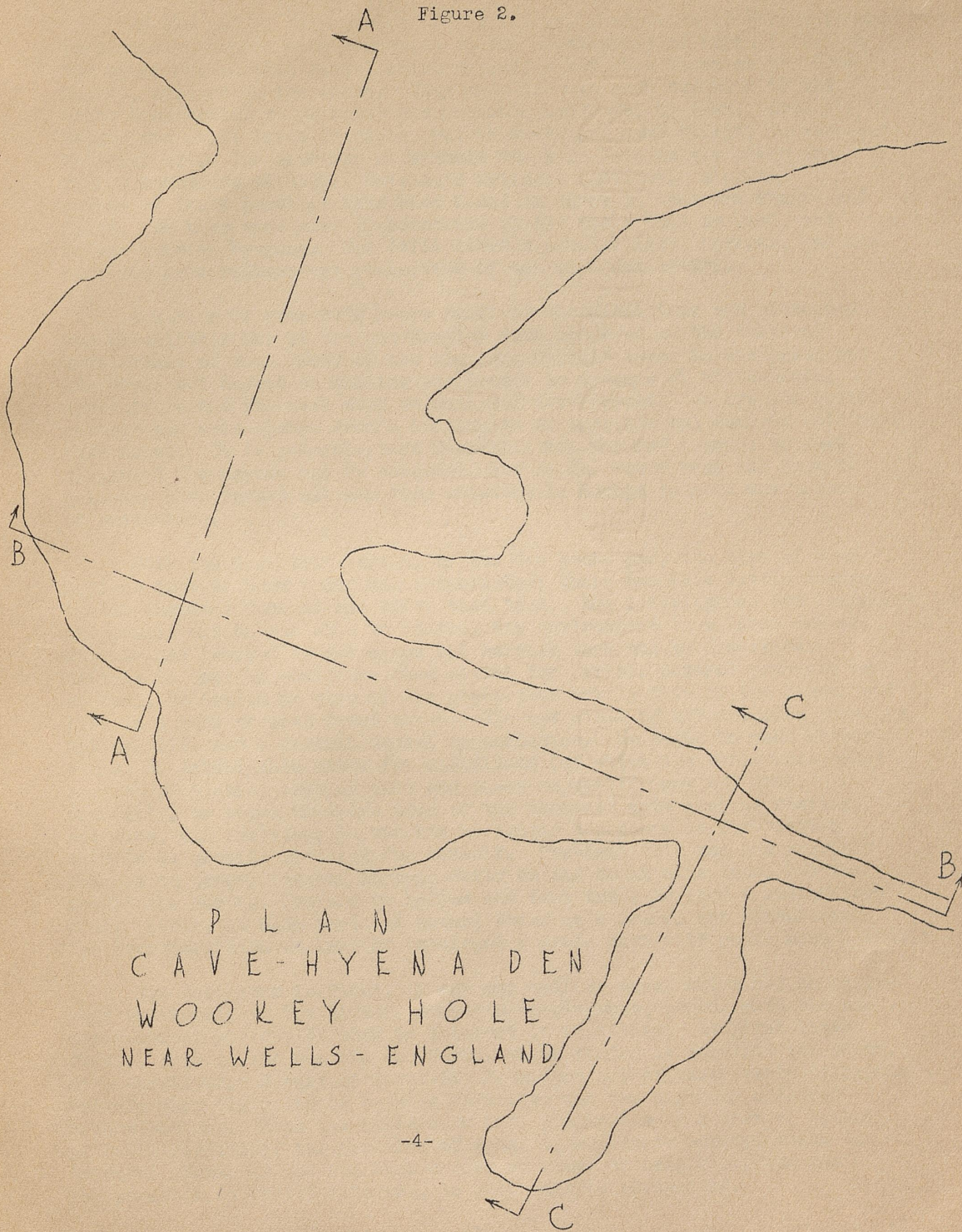
In 1857 a skull was discovered in England which makes it possible for us to reconstruct another type of man on the main stem of *Homo Sapiens* - the *Eoanthropus Dawsoni* or the Piltdown Man. This creature possessed a more developed type of skull than *Pithecanthropus Erectus*. It is this last type of man which is one of the links in the chain of development of the latter group. One has only to glance at the chart to see that the two strains - the Neanderthaloid and *Homo Sapiens* - had separated in the Pliocene period. Much later, the former became extinct, whereas the latter evolved into present day man.

We have, then, three fairly well developed types of man in the Eolithic period of the early stone age,--*Pithecanthropus Erectus*, the Heidelberg Man, and the Piltdown Man. These beings had a small brain capacity and their speech must, as yet, have been highly limited. They must have had some slight form of culture. Possibly they possessed rough tools of some sort and they lived in caves. It is probable that the forebears of the Neanderthaloid Man had first lived in trees (even certain primitive cultures that have survived into our own time preserve houses in trees as the main type of shelters.) When this early human animal descended from the trees (owing to the fact that some change in the earth's surface may have deforested large areas,) probably he began to assume an erect posture and he developed the use of his legs, since his hands and arms had been developed during his arboreal existence. If early man developed any type of shelter in the first stages of the terrestrial type of existence, not enough evidence remains for us to be certain. He must have realized that it was necessary to secure some protection from the elements and from wild beasts so he took to the natural shelter provided by caves. Man, as yet, had developed no great ability at hunting, in fact he was mostly a hunted creature. He lived mostly on vegetable matter and on such small animals as he could catch. At this time he possessed little or no idea of social organization. Life was a haphazard and dangerous business.

During the lower Palaeolithic era we must look to Europe for most of our present knowledge because there the period has been most closely studied. In Europe several important changes in climate took place. Midway in this era occurred the period known as the Chellean when most of Southern Europe was very warm. In the following Acheulian period the climate gradually became colder, ushering in the last Ice Age, a period of glaciation known as the Mousterian, when man had no choice but to live in caves.

We illustrate here one of the caves used as shelter by Paleolithic Man,--that of Wookey Hole near Wells in England. (see Figure 2.)

Figure 2.



P L A N
C A V E - H Y E N A D E N
W O O K E Y H O L E
N E A R W E L L S - E N G L A N D

Man at this period was a short stooping creature resembling the African Bushman of today. By this time his ability to hunt had improved considerably and he had learned how to use fire.

At the end of this period of glaciation, conditions in Europe began to assume an aspect more conducive to the development of human life. In the upper Paleolithic period which ensued, a new race known as the Cro-Magnon, appears on the scene. They seem to have been superior to the other Neanderthal stock which was probably destroyed by them. Cro-Magnon man still lived in caves, but he developed some ability in representational art. The drawings of animals which he left in his caves are really monuments of highly developed artistic instinct. A great number of these drawings have been found in caves in southern France and Spain. He also made many improvements in the tools that he used, and in his hunting weapons. Man still lived a nomadic life, however, and had only the most rudimentary conception of social organization.

A period of some 8000 years known as the Mesolithic era succeeded the Paleolithic but it did not display much progress in the cultural development of men. Many of the big game animals began to disappear and man could not depend on hunting any longer as a means of subsistence. Agriculture was the next step in cultural development. We are not quite certain how this change from a hunting to an agricultural form of existence came about. It is possible that Neolithic man who had learned to farm displaced Cro-Magnon man by conquest, but on the other hand the lack of game may have forced all men then existent in Europe to seek new means of sustenance.

With the Neolithic period, or the New Stone Age, the type of Homo Sapiens that we know today was established; there has been little change in the physical form of man since that time. His intelligence had increased enormously and he was able to control his environment to a large extent. When he had learned to sow crops and harvest them and to domesticate animals so that he could use them either for certain natural products or as food, he tended to give up the precarious roving life of the hunter and live in a more or less fixed abode. The new state of affairs made possible village life and a certain social organization. He began to make better tools; he established mines for his flints (of which the tools were made) instead of picking them up here and there as earlier men had done. Gradually, he began to learn some of the domestic arts such as weaving, spinning, and knitting; he was now no longer dependent on fur-bearing animals to provide clothing for himself. Pre-Neolithic man had probably learned to propel himself through water on the trunk of a tree, but the man of the new age learned to hollow out that trunk to form a rudimentary boat. Later, he made boats of animal skins on a frame, and basket work. For transportation on land he developed a crude cart with rough wooden wheels.

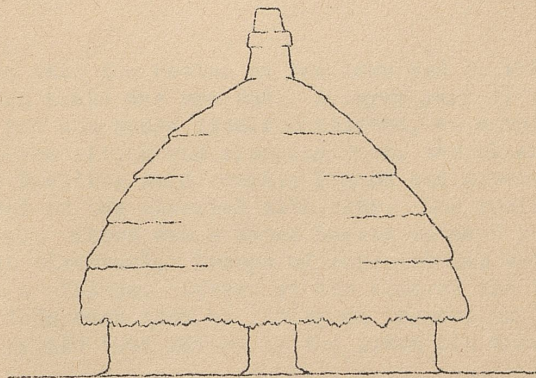
The religious instinct, if one may call it such, which had shown itself previously in the history of man's development, began, with the new agricultural society to show an interest in fertility. At first those forces, such as the sun and the earth, which tended to regulate the crops, were worshiped. A cult of fertility developed out of their early religious beliefs when the relation between fertility and the birth of children became obvious. When the child came into prominence as a sort of symbol of human fertility, the position of woman in Neolithic society began to improve. Formerly she had been a sort of slave or hanger-on, but now her position in family life was, to some extent, recognized.

While there was some division of labor, the woman had to take care of all domestic matters and plant the crops. The man was left free to attend to various social duties or hand craftsmanship of some sort. This type of organization in family life persisted well into the historic period, when we shall see it again among the barbarian tribes of northern Europe where Neolithic standards still persisted.

With the Bronze and Iron Ages we are well within the historic period, so we need not discuss them here. We shall consider the main types of shelter as they evolved in the various civilizations that developed in the Near Eastern and Mediterranean sections, but first we must say something about Neolithic housing.

With the advent of village life, Neolithic man began to evolve a better type of shelter. The simplest type of house was that found in the land villages, usually a small round, one-room hut built of wood, stone, or clay, over a pit excavated so as to provide more room inside. Roofs were made of a rough type of thatch with a hole in the centre to let out the smoke from the hearth beneath. There was only one small door and quite often no windows. This type of hut is one of the most common forms of primitive shelter and it has survived even into our own day in the more remote parts of the world. Examples of the same sort of thing will recur again in our discussion so that it would be well to keep the Neolithic land hut in mind. At the present day the round hut is to be found very often in the more primitive sections of Africa; an illustration of the African dwelling is given here.

Figure 3.

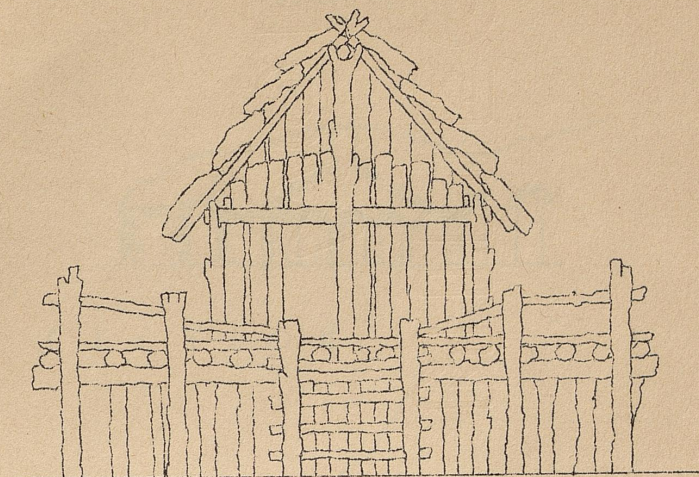


There have been modifications in the construction, of course, but in its main points it is essentially the same. In the Neolithic period, a collection of seventy-five or a hundred of these dwellings would be grouped within a stockade of logs or rude earth works and ditches. Remains of some of these fortified villages are still to be seen in England.

Remains of lake or lacustrine villages have been found in both England and Switzerland. A group of Neolithic men might select the shallow waters of a lake as a site for their dwellings, because such a location could be easily defended and because the lake provided a source of food.

They used boats to transport themselves to the mainland when necessary. A typical mid-European lake dwelling of the Neolithic period represents a higher type of construction than the land hut. (see Figure 4.)

Figure 4.

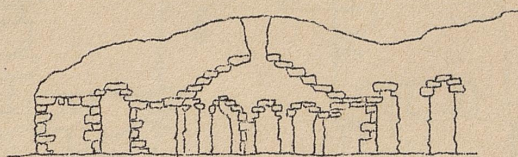


Piles were driven into the bottom of the lake and on this a rectangular platform of wooden slabs was erected. A large part of this area was left uncovered, and the house itself consisted, as a rule, of two rooms, one of which was the living and sleeping room, the other the kitchen. The walls of the dwelling were roughly framed and covered with slabs of wood, plastered on the interior with clay. The roofs were high pitched and made of thatch. There was a stone hearth in each room and the floors were covered with birchbark. Groups of these houses were clustered together to form a village. Later, at the time of the fall of the Roman empire, we find this same idea of living on lagoons or lakes recurring, when a group of people took refuge at the place now known as Venice.

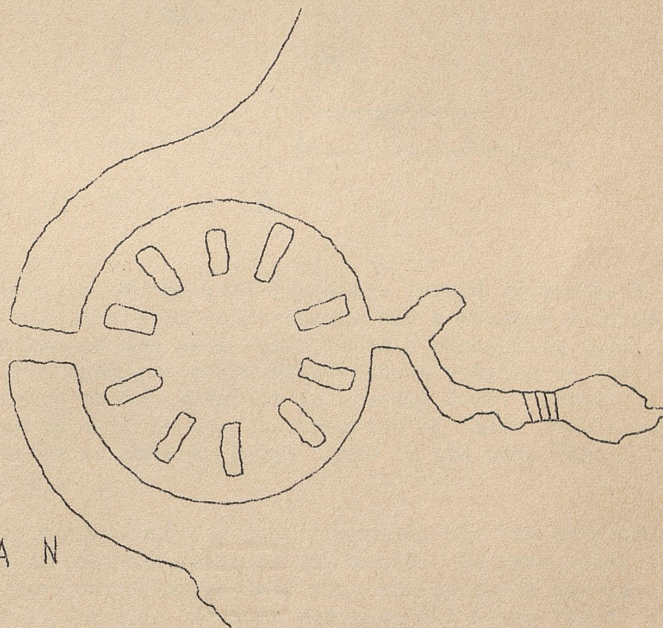
Neolithic man also knew how to build roughly in stone. He learned how to set up large stones and so made the first attempts at megalithic construction (a method of building with large stones). Large numbers of these early monoliths survive. They were probably set up in connection with religious worship or as memorials to heroes or great events. The single stones are known as menhirs with a lintel on top. Dolmens or table stones are large flat monoliths supported by other stones; these monuments may have been part of the burial chamber of a barrow from which the earth had been worn away. Much more elaborate than any of these single monuments is Stonehenge in England, which is the greatest of the megalithic constructions, but since it was probably used for religious purposes it is not exactly pertinent to our discussion. We know from these remains that Neolithic man was able to build in stone.

Neolithic man in England buried his dead in barrows which consisted of stone chambers covered with a mound of earth. These burial chambers appear to have been modeled after the homes of the living, because remains have been found of Picts' houses in Scotland which display the same type of construction. We illustrate one of these earth covered stone houses of the bee-hive type which was found in the Hebrides. (see Figure 5).

Figure 5.



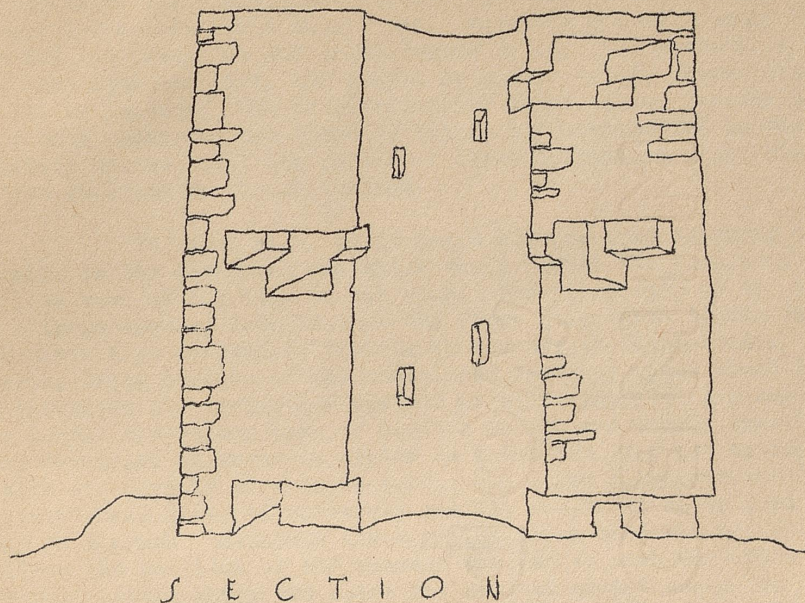
S E C T I O N



P L A N

The stonework shows some skill in construction; there is even a rough attempt at vaulting. This type of dwelling has survived farther to the north in the Eskimo house which is, however, constructed of blocks of ice. The Picts' tower illustrated here, (Figure 6) is also an example

Figure 6.



of megalithic construction of the late Neolithic period in Scotland. These towers have a circular open court inside and a passage winding up through the thickness of the wall which forms a connecting link between the small upper chambers which have windows opening on the court. The only opening on the exterior is a small door. Defense was probably a strong element in the construction of these dwellings. They were probably built as late as Roman times in the more remote sections of the country.

It is obviously impossible for us to consider all the developments of Neolithic shelter in various parts of the world. We have tried to show only those manifestations which have some influence on the development of shelter in Europe. We must now turn our attention to the Mediterranean world.

The Egyptian House

Egyptian history may be divided roughly into three periods-- that of early Egypt and the Old Kingdom (c. 4500-2475 B.C.); the Middle Kingdom and Empire (2160-1090 B.C.); and a period ending in 30 B.C., during which the country was for the most part under foreign domination, except for a relatively short time. Egyptian art was highly traditional, and did not change to any great degree in its long history, although it is, like Byzantine art, not nearly so static as the casual observer might be led to believe. The architecture of Egypt, also, partook somewhat of this same character and there is little differentiation in the types of Egyptian houses until the period of Greek domination (B.C. 332-30) when native building became Hellenized.

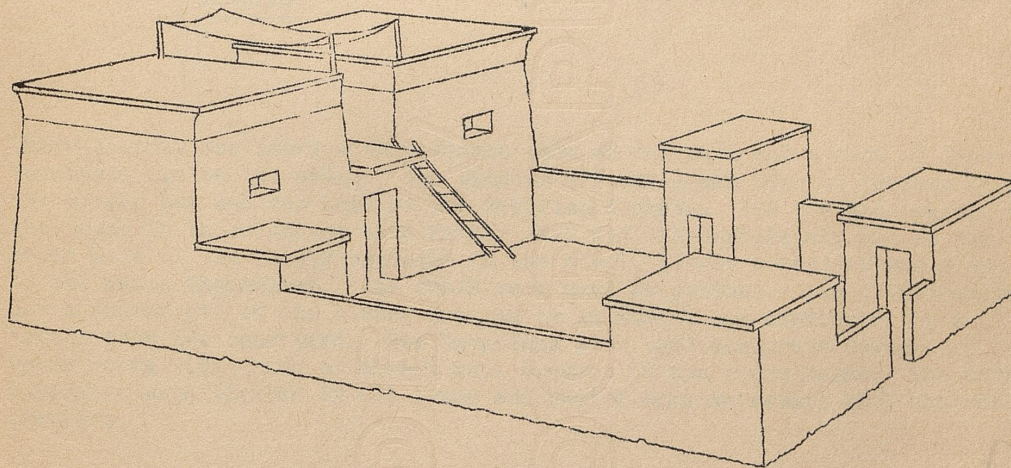
To begin with, Egypt has a climate that is among the most equable in the world and one which would permit the people of the country to live most of the time in the open. The prosperity of the country was, in a large degree, dependent on the river Nile which flowed through a narrow plain kept constantly fertile by successive inundations. In the dry seasons large numbers of the unemployed laboring class would be employed in extending the irrigation systems on which Egyptian agriculture depended. The people themselves were of Semitic origin and highly intelligent, but they developed an economic system in which the greatest extremes of wealth and poverty were to be seen. The upper class consisted of a relatively small group of extremely wealthy nobles at whose head was the king or pharaoh. Although these nobles owned many slaves, this did not relieve the position of the peasant who had to work very hard for his living. Little money was spent for shelter except among the highest classes. Cities grew up in Egypt around the palace of the king or the temple of the local deity. Quite often the capital of the country was changed and, except in the case of the palaces, the investment in housing was so slight that the populace followed the court, leaving the city to crumble away into dust. There was no middle class as we know it to-day and no rich merchant class, although there were a few wealthy people who were not of the noble group.

There is very little actually remaining which would serve to give us a sufficient idea of the Egyptian dwelling house, but a considerable amount of knowledge has been gained from manuscripts, tomb paintings, and carvings on monuments. Probably many changes took place in their shelters as they progressed in social organization from a group of isolated warring tribes to a state of more or less urban civilization under an absolute monarch, but that is not part of our discussion: we are concerned only with the more developed Egyptian house of the later period. A great majority of the Egyptian people--the peasant class--had only the simplest and most primitive type of dwelling.

The early houses of the poorer classes were built of wood (palm or sycamore), often consisting of a single cell and roofed with palm leaves. Later, a type of inferior sun-dried brick made of Nile clay and straw formed the walls. These shelters, generally built on flat ground near the river, were poorly constructed, easily destroyed, unsafe and unhealthy, and, as a rule, they lasted only about three or four years. When one house collapsed another was built on its ruins, and the process was repeated until the latest house rested on a sort of terrace formed of its predecessors. This mound protected the latest dwelling from the periodic inundations of the Nile. The houses themselves had a small door but no windows and the interior was divided by one or two partitions which did not extend all the way up to the roof. The poor, who spent little time in their homes, used them only as shelter from the hot noonday sun or as a place to store their few possessions. In the cities there would be whole rows of these rude shelters lined up to form the sides of streets.

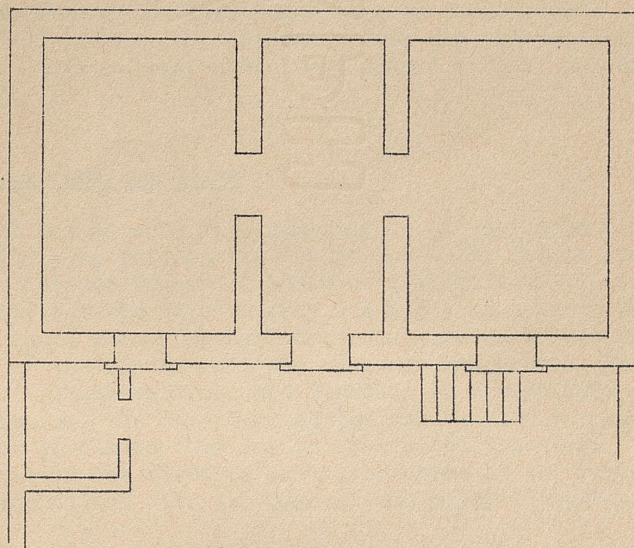
The upper classes in Egypt possessed much larger and better houses which were built of wood properly framed and constructed, or of the common sun-dried brick and sometimes, if the builder were a person of consequence, of stone. Most of these houses had courts of various sizes and the rooms would be located around the court, on three sides of it, or behind it. The house that we illustrate has the house proper situated at one end of the walled forecourt. (See Figure 7.) About this court might be

Figure 7.



various domestic offices, poultry houses, and stables. In this particular illustration we have an oven, a latrine, and two storage rooms. The court itself was cultivated as a garden where the Egyptian family often took its meals. The plan of this house is not very elaborate, having more in common with peasant dwellings of the better type than with the houses of the rich. (See Figure 8.)

Figure 8.



There is only one story with a common room on one side and a room of indeterminate use on the other. The windows are small and high up because of the bright sun and the heat of the Egyptian climate. For the most part, the rooms in these houses were rather dark and ill-ventilated, but as the whole life of the family centered in the court, little attention was given to the rooms themselves. The roofs were used as porches - our illustration has a sunken pit in the center covered by an awning and approached by a ladder from the courtyard. The Egyptians also used elaborate devices on their roofs with which to direct cool breezes to the rooms below. The dark interiors were lighted by oil lamps and heated when necessary with charcoal braziers.

It is only in the palaces and the houses of the nobles and the very rich that we find any improvements in the art of living. The plans of the palaces were highly complex with many separate sections for the Pharaoh, the women, the servants, and the slaves. All the most important rooms were beautifully decorated and furnished with painted chairs, tables, and beds. The walls were hung with tapestry; pottery and vases of many kinds were used extensively. There were more windows in the palaces, which, while they were still small, were fitted with lattices and shutters. The doors were formed of one or two valves turning on metal pivots and secured with bolts and locks. The kings and the nobles, however, were often more interested in their tombs than in their houses, as the former were to be their eternal habitations. With all its draw-backs the Egyptian house is, nevertheless, a distinct upward step in the history of shelter.

West Asiatic or Sumerian House

It may be said with some degree of verity that the great plain of Mesopotamia lying between the two rivers - the Tigris and Euphrates - contains the earliest traces of Semitic civilization. There is a certain similarity between this country and Egypt as regards the general character of the land, which is, however, even more fertile than that of Egypt. The presence of the rivers made the country prosperous. Properly speaking, a number of civilizations rose and declined in Mesopotamia - the Sumerian, the Old Babylonian, the Assyrian and the New Babylonian, but as they all have qualities in common they may be considered together. The plain lying between the rivers was first partially occupied by the Sumerians though, they became identified with the Semitic and Kassitic tribes.

Traces of Sumerian occupation are to be found prior to 4200 B.C. in such cities as Ur of the Chaldees (which has been excavated within the last few years) where a high degree of civilization apparently existed. About 2750 B.C. there arose a Semitic chieftain who consolidated all these kingdoms under one government, forcing his own nomad tribes to adopt a more settled existence. A short while before 2200 B.C. a new group of Semitic tribes settled at Babylon and began to fight their way to supremacy in the Mesopotamian region, but it was not until 2100 B.C. that the Old Babylonian Kingdom came to a position of power, when, under the rule of Hammurabi, they also developed a highly civilized way of living. This civilization succumbed about 1300 B.C. to the invasion of the Assyrians, a war-like Semitic people, who ruled in turn until 621 B.C. when, weakened by luxurious living, they were defeated by the Chaldean forces from Babylon. The New Babylonian empire succeeded it. With the fall of this last power, to the Persians in 539 B.C., Semitic supremacy in Mesopotamia comes to an end.

Although the governmental control of Mesopotamia shifted considerably, the history of civilization in that region demonstrates an almost continuous development. There were many points of similarity among the Sumerian, Babylonian, and Assyrian manifestations of the civilizing impulse. Most of the phenomena of this great civilization belong, however, to the original Sumerians and the Babylonians; the Assyrians were a war-like and unimaginative people. In every case the most important feature of each of these nations was the economic structure which was based primarily on agriculture. On this foundation there grew up a commercial or military organization. Agriculture always remained the chief occupation, but, as has already been suggested commerce was almost as important. The chief cities and commercial centers of this civilization - Nineveh, Babylon, and Nippur were much alike, and they were all located on the east bank of the Tigris. It was the commercial activity of these peoples which helped to distribute the wealth of the country more evenly among all classes of the population, so that we do not see here the extremes of wealth and poverty so characteristic of ancient Egypt. A community of this sort usually builds up a legal structure, which, in the case of the Sumerian civilization reached a high degree of elaboration. The laws regarding personal property, particularly those in regard to housing, are extremely interesting. A number of leases recorded on clay tablets have survived, which show that the Babylonian tenant rented his house for a period of three to five years and paid his rent semi-annually. With regard to laws concerning the construction of houses, there still remain records of a case in the Babylonian courts where the son of a builder was executed because the latter had, by malpractice in building, caused the death of an owner's child. A woman could own property, buy and sell it, and bequeath it of her own free will; facts which show that women were not held in such low esteem as they sometimes were in later civilizations.

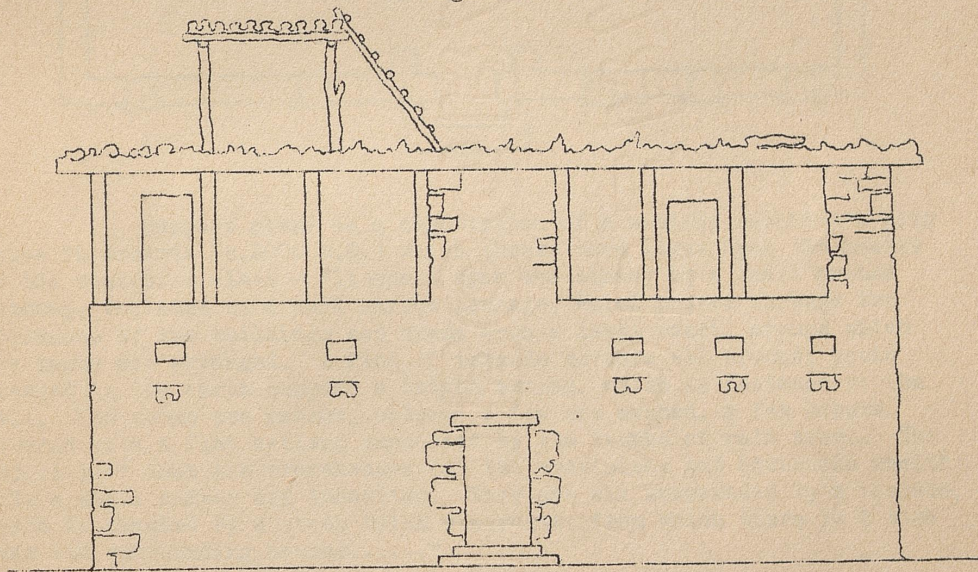
It has already been mentioned that city life was a marked feature of Mesopotamian civilization. As in Egypt, the cities grew up in confusion around the palaces of the kings or the temples of the gods. The early Sumerian towns were usually fairly small and built around a central temple tower (resembling in form the stepped pyramids of Egypt) which had a staircase winding around it to the top. At the base of the tower was a shrine to the God; a building which resembled the ordinary dwellings of the townsfolk. Ranged around the court were the storehouses and business offices of the temple. In Mesopotamia, as in Egypt, the conduct of religious affairs was largely left to a group of priests. Grouped around the temple enclosure were the dwellings of the citizens - bare rectangular structures of sun-dried brick, each with a court on the north side, and, on the south side of that court, a main chamber from which other rooms were entered. Sun-dried brick was almost the only building material used by the Sumerian builders - stone was difficult to get and was used only for ornamental sculpture, carved seals, and the like. The Sumerian bricks were of larger size than our own, being twenty inches both in length and width, and three and a half inches thick. This type of brick, dried in the sun, was not a very durable material; it had a tendency to crumble as it aged and sometimes, after a hard rain, a house would collapse altogether. In the latter case, a new dwelling would be built on the ruins of the old. The sites of ancient cities in Mesopotamia are marked by these mounds of decayed brick. Commercial brickyards were not unknown in Babylon.

Cont. 1

In general, the houses of the poor were small mud cabins with conical roofs and very small windows. The middle class houses were rectangular, usually not more than one story high (although two stories were not exceptional), and they were provided with flat roofs to serve as outdoor living rooms, as the case had been in Egypt. Sun-dried brick was, of course, the only building material, although wooden columns and pillars were also used. Painted stucco was the chief decoration, but the walls were sometimes plated with bronze, gold, or painted terra cotta, depending on the wealth of the owner. Here as in Egypt, the windows were small, except in some of the larger dwellings, where there were bigger windows near the ceiling which could be closed by means of curtains when the weather was bad. Although the Sumerians used as many articles of furniture as the Egyptians, beds were not at all common. Babylonian tapestries were famous even in Roman times.

The house that we illustrate appears to have been some sort of country house. The ruins of this dwelling were discovered in Chaldea, near Tello. (See Figure 9.) It was constructed of sun-dried brick, three

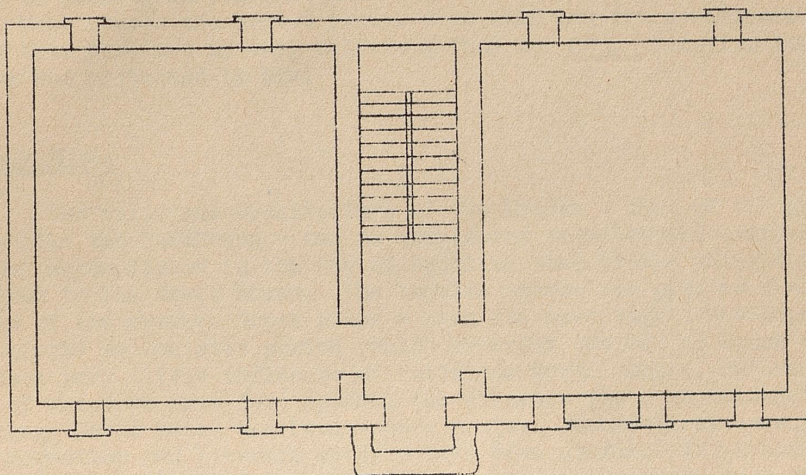
Figure 9.



thicknesses in width and at two levels. The upper was approached by a wooden ladder or a detachable staircase. There were two rooms with

small windows high in the walls in the lower story, and, as there was no communication from them to the exterior save from above, they must have been store rooms. On the upper level were two living rooms and an open gallery supported by wooden pillars. The wooden platform built on the roof is conjectural. (See Figure 10.)

Figure 10.



Maspero gives us a description of a wealthy merchant's city house in Assyria (c.3000 B.C.) which throws more light upon the houses of the wealthier class - "It opens upon the street by a small arched gateway, followed by a dark narrow passage, which passes through the thickness of the buildings and opens upon a large court, around which the rooms are arranged. A kind of veranda extends all around; posts planted in the earth support a bright awning, which is fastened to the wall. The rooms are narrow, oblong; a few are arched, a few others covered with a flat ceiling supported by the trunks of palm trees. The majority of them are storehouses for the provisions and household wealth; only a small number are inhabited. They are all surrounded by a terrace, which is reached by a steep brick staircase; from which there is a view over the surrounding houses....."

"During the hottest hours of the day the inhabitants descend and take refuge indoors. The coolest room in the house is often below the level of the courtyard....."

Part I
"The floor is paved with slabs of polished plaster of Paris, which resembles a fine grey and white marble, and the walls are covered with a layer of fine plaster, soft to both eye and touch. They are watered several times a day during the summer and the water refreshes the air as it evaporates,....."

As far as quality of shelter is concerned the Sumerian civilization is about on a par with the Egyptian, but in the matter of the economics of housing they are responsible for several important developments. Most houses are rented rather than sold and the arrangements for leasing them were not so very different from our own. Finally, personal property was protected by law.

The Greek House

The religious architecture of the Greeks - that of the great temples like the Parthenon - has so completely overshadowed everything else they accomplished in the way of building that little thought has been given to the Greek house. The temples themselves give no clue to the form of the average Greek house - even the most highly developed houses of the Hellenistic period (which precedes the era of Roman domination) show very little influence of religious work. Again, before the period of which we have just spoken, the evidence for a reconstruction of the average Greek house has been rather meager. Excavations have yielded some information and literary sources have been useful. It is difficult to generalize about the form of the average house, because, in a great number of cases, there was a considerable variety of arrangement, a fact which has been proved by excavations. Quite often the information gathered from literary sources is either vague or contradictory. When all the evidence has been gathered, we have, however, a fairly adequate idea of the development of the Greek dwelling.

In general, Greek art falls into several large periods; the Neolithic, extending from 6000-4000 B.C.; the period from about 4000-1000 B.C. in which the Aegean, Cretan (or) Minoan periods occur; the archaic period from 1000-500 B.C.; the Periclean (the Great Age of Greece) from 500-350 B.C.; and the Hellenistic from 350-200 B.C. It is possible to show some form of development in the Greek house through these various periods, but we shall consider only the most important examples.

The Greek people were part of the great Aryan group living east of the Caspian Sea, whence they migrated to either Europe or India. The original inhabitants of the country bordering on the Aegean Sea were the Pelasgians, a people of Semitic stock with a fairly well developed civilization. The Homeric Epics probably are the reflections of the last phases of the struggle between the Pelasgians and the Aryans for the mastery of the Aegean.

Part I

In the Homeric age (an epoch which falls roughly into the second period of the chronology given above) the Aryan people had settled down to some degree. Their civilization was feudal and their society strongly aristocratic in form, inasmuch as they were governed by a group of chiefs of whom the Ulysses of Homer may be taken as an example. Family and home life were well developed, the women of the house being treated as equals and not secluded as they were in later Greek society. Probably the first shelters of these Aryan Achaeans - the Homeric people - were conical or round huts developed from the tents of their nomadic period and reminiscent perhaps of the shelter of their home territory near the Caspian. After a time the outline of these dwellings assumed, for practical reasons, a more oval form, out of which the rectangular shape of the better type of Homeric and the later Athenian and Hellenistic houses developed. The smaller houses of the period were shabby, but the palaces were more elaborate and commodious. A plan of a typical Homeric palace, although admittedly conjectural in many ways, is important to any consideration of the later development of the Greek house. The building was entered by a gateway in the front wall of a courtyard which preceded the house proper. At the far end of the court was a portico with a door leading into the megaron, which was the general living room. Beyond this was another room called the women's megaron, where the female members of the household retired at night. At the extreme end of the house was the master's bedroom. The megaron was always the most important room in the Greek house, and it is found in almost all stages of its development. According to the Odyssey, some of these Homeric palaces were very beautifully decorated, and the interiors adorned with gold and silver.

In passing, it would be interesting to consider the house developed by the Minoan civilization of Crete. From 2500 to 1400 B.C. the Cretan kingdom flourished, developing a society in which extremes of wealth or poverty were little known. The prosperity of the island was based on its sea trade, which was protected from danger by a strong navy. The Minoan town was in appearance far more modern than any of the later Greek cities. The more modest houses were constructed of sun-dried brick on lower walls of stone, and displayed rows of windows in the front. These houses show some variety in plan, a number of them being quite complicated and irregular. A simple cell entered by a vestibule formed the first and earliest Cretan house. This type developed into that of the oblong megaron with two vestibules. The addition of courtyards and passages was a later elaboration. In some houses a stone stairway led from the megaron to an upper floor which contained the main living rooms. The rooms were sometimes lined with wood and the walls covered with painted plaster. Bath rooms, with appointments that seem startlingly modern today, were a common feature of the Cretan dwelling. The civilization of which these houses are a concrete evidence, even in the fragmentary state yielded by excavation, disappeared quite suddenly - apparently destroyed by an invasion of the Greeks.

Ch. I

The country we know today as Greece is much farther north than Crete, and as it is often cold during the winter season, a type of shelter was developed which contained the hearth - for centuries the center of the northern home until our own day, when it has rather lost its place.

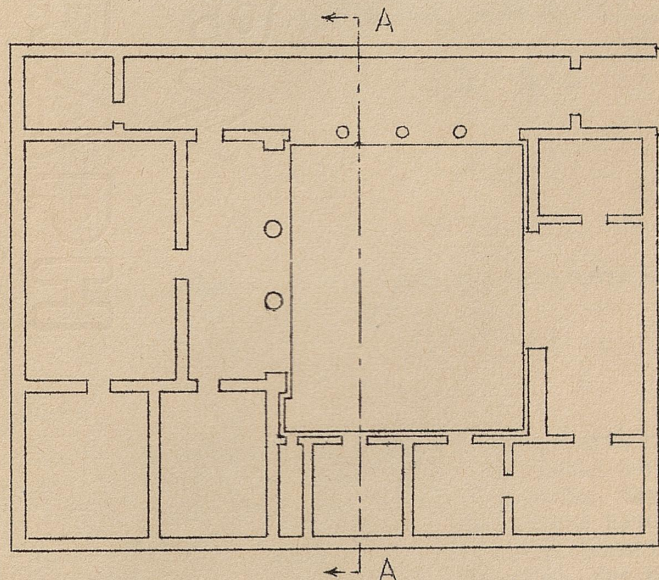
In the period of antiquity, Greece was not a single unified country but rather a collection of city states, most of which were developed during the Archaic period (1000-500 B.C.). By the time of the so-called Periclean Age - the great classic age of Greece (500-350 B.C.) - Greece was divided into a number of these small states of which we may take Athens as the example. Athens, even in her Golden Age, was not noteworthy as a city of fine houses, in fact it would probably not be too much to say that our present insufficient information concerning the Greek dwelling may be, in part, due to the general lack of interest in home life manifested by the ancient Greeks. The Athenian citizen cultivated a public life decidedly at the expense of a private home existence. Women occupied a subordinate position; their functions in society being to run the house (the actual work being done by slaves and to bear children. They were not allowed to handle money and the men even did the marketing. They stayed at home most of the time while their husbands were discussing state affairs at the town meetings, discharging the duties of their civil offices, or gossiping with their friends. It will be seen that the home and home life meant very little to the average Greek - the temple and the public square were more important. Beautiful public buildings form a strong contrast to the meanness and meagreness of many Athenian houses even of the better sort. Lack of display in the home was considered a virtue.

The Athenian houses of wood and stone were built close together. Sometimes they had a projecting upper story and a garden in front. There is some evidence of blocks of three and four story dwellings for the poor, but most of the better houses had only one floor or, at the most, two. The dwellings of the upper classes usually had some sort of inner court which was surrounded by the chief rooms. These courts sometimes had one or more colonnades at the sides, but there is almost no evidence until the Hellenistic Age, to suggest a completely developed peristyle or colonnade on all sides of the court. Vitruvius (an ancient writer on architecture) and a number of modern authorities have claimed that the normal Greek house of the period had two courts, the andronitis for the exclusive use of the men of the household and the gynaikonitis (entered through the first court) for the use of the women, but this view does not always agree with evidence obtained in excavation and in literary sources. In one house, at least, there was no second court; the women used the main court and retired to their own apartments when they wished. In the two story houses the women's quarters were often upstairs and the men's downstairs. Even at home the two sexes were segregated as much as possible. The megaron or general living room is rarely found in the Athenian house. In most of these dwellings there is a general tendency toward cramped quarters and a small number of rooms. Excavation has yielded some information, but our conception of the Greek house of the Periclean Age must depend in a large degree on literary sources.

On the other hand, excavation has yielded most of the information that we possess regarding the Greek house of the Hellenistic Age (350-200 B.C.). Many houses of this period have been examined in the excavations at Delos and Priene. Priene seems to have grown up soon after the dedication of the temple to Athena by Alexander and thus dates from the 3rd century B.C. These houses certainly belong to the same epoch because no layers indicating previous building have been found beneath them. The town must have presented an appearance similar to that of Pompeii, the streets being long and straight and the houses without windows, being lighted entirely from within.

One of these houses at Priene, which we illustrate, displays evidence of a revival and the last phase of the megaron type of plan. (See Figure 11.)

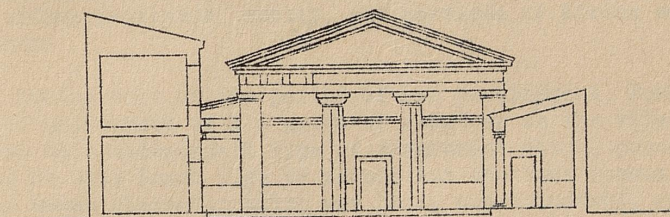
Figure 11.



Entrance is gained to the house by means of a long passage with a porter's lodge at the end. The passageway opens at one side into the court which has an exedra on one side and a porch on the other which leads to the megaron. Opening from both the porch and the megaron are two bed chambers.

The small rooms off the courtyard were probably kitchens and offices with a floor above for the women. It will be seen that the house has become more ornate - the porch has features borrowed from the temple architecture of the time. (See Figure 12.) As the Hellenistic Age advanced, the

Figure 12.



SECTION A-A

interior of the house became richer and all the arts were made to contribute to the luxurious appearance of the house.

The Roman House

With the Roman house we are able to see a further advance in the science of shelter in the Western World. The early dwellings of the Latin peoples were, of course, rather crude, but during the Republican period, and, still later, under the Empire, the houses became constantly more elaborate, and, in the houses of the very rich, luxurious in the last degree. In the great cities like Rome, we see, also, the beginning of a social problem which has come to assume a great importance in the present day - the housing of the poorer elements of the population in a congested urban area. There was, however, no attempt to solve the problem - the Roman of the lower classes lived in much the same haphazard manner as did the tenement dweller of New York in the last century.

Before we discuss the house itself, we must devote a prefatory paragraph or two to the development of Roman domination in the Mediterranean basin, because the social changes which come with the various periods in Roman history are of the greatest importance in a discussion of early housing. The Romans began their long ascent to power in the region of the Tiber - the only river of any importance south of the Po. In

southern Italy, the Greeks maintained a number of colonies, while to the north of the Tiber were located the Etruscans, a people whose origin is still uncertain and who were not native to the Italian peninsula. South of the river lived a group of peoples among whom were found the Latin tribes. The Latins settled at what is now Rome, and began a long contest with the Etruscans for the administration of Central Italy. By the third century B.C. the Romans had subdued not only the Etruscans, but the Greeks of the southern colonies and the other groups who were racially allied to them. Italy was now completely Roman. From 264 B.C. to the end of the century the Punic wars - the contest between Rome and Carthage, in which the former emerged victorious - were going on. Gradually Rome began to conquer other sections of the land bordering on the Mediterranean. Spain, the Balkan peninsula, Sicily, and portions of Africa were added to her domains.

During most of the period of her development, Rome had a republican form of government with a group of senators as the chief governing body. It was this independent type of government which, possibly, had something to do with Roman rise to power; but the real reason is to be found in the Roman character which was hard, unsentimental, and eminently practical. In early Rome, agriculture was a profession of great dignity but the Romans never made a great success of it, nor did they, for all their practicality, become noted for industrial power. Their real genius lay in their ability to direct and govern; to weld all their various and far flung possessions under one government. Culturally, they leaned heavily on the Greeks, who were a more thoughtful, intellectual, and artistic people.

In the first century B.C. such men as Julius Caesar added new dominions to the Roman state and paved the way for the establishment of the Empire under Augustus Caesar. It was Augustus who saw that the peoples of the Roman possessions needed a loyalty to a person, an emperor, who represented the Roman government and it was he that became the first emperor. Under the Empire Rome prospered for about two hundred years and then decay began to set in. When the Empire was split into two sections with another capital at Constantinople, the glory of Rome had completely departed.

The early Romans of republican days laid great stress on domestic virtue and family life. The Roman household was absolutely under the control of the husband and father (pater familias); and the wife, the children, the dependents, whether bond or free, were under his jurisdiction. We should also take into account the divine members of the group - not exactly deities, but spirits - the Lares and Penates to which the human members of the household looked for protection and prosperity in all their actions. Despite the severity of the rigid paternal rule, a certain bond of tenderness existed among the father, mother and children.

The education of the sons of the family was left in the hands of the father who saw to it that his children were trained as Roman citizens. The strength of the early Roman state was due to the practice of simple virtues and a code of high moral standards, any deflections from which were punished.

With the late republic and the Empire, social ideals began to change. Roman life began to lose its provincial character. A rapid rise in national wealth was accompanied by a change in its distribution. The great noble families of Rome exploited the territories abroad, the profits from which they squandered on luxurious living and the provision of lavish displays in the public amphitheatres. The position of the poor freeman became gradually worse because it was impossible for him to compete with slave labor. A large class of poor people, housed in very squalid quarters and living mostly on governmental donations of grain, grew up in Rome. They were kept amused by huge shows and gladiatorial contests in the arenas and circuses.

Family life began to change also. In Rome and in the great provincial cities where Roman standards were imitated as closely as possible, the new luxurious metropolitan way of life began to undermine the old ideals of hardihood and austere virtue that had made the Romans masters of the Western civilized world. The old noble families became soft; their children no longer were brought up by their parents in the strict ways of early Republican days. Divorce came to be rather frequent, and there was consequently very little wholesome family life among the upper classes. Even if members of the family did remain on good terms the old devotion to the clan or family, which had been such a salient point in Latin life, degenerated into a sort of empty snobbery. The husband or father of the Empire was too much occupied with his public or social duties and his wife and children too intent on pleasure to give much thought to home life. The old group of Roman freemen - the mass of average citizens of the Republic, which had formed a sort of solid middle class, was economically ruined by the vast importation of slave labor, and they lived as best they could in urban trades, in the army, gradually becoming weaker and more shiftless and swelling the mass of the poor population in the great cities. But the great Roman governmental and military machinery held the slowly weakening Empire together well into the Christian Era.

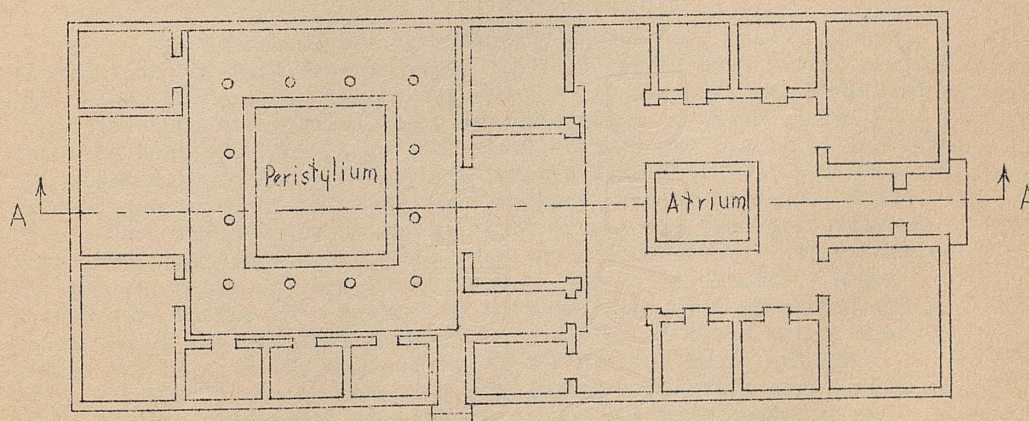
With the historical and social background established we can get back to our discussion of the home. For the most part, the shelters of the early Latins were round, one-room huts made of plaited reeds and rushes plastered with mud and moss. The doors, which also served as windows, were closed with rough wooden panels on hinges. Roofs were conical in shape and made of reeds. Clay models of these houses, used as burial urns, were found in tombs of the period that have been excavated in modern times.

The poorer Etruscan dwelling also followed the same type, but the houses of the wealthier classes were more elaborate with a vestibule, central court, and family rooms. The Etruscans, as did the Romans much later, decorated the walls of their rooms with mural paintings.

Gradually, the Romans began to develop a type of house that was peculiar to their own group. The typical dwelling of the early republic was really an elaboration of the Latin hut just described. The chief room was known as the atrium, a term which was probably derived from the word *ater* (black) in reference to the walls and rafters which had been blackened by the smoke from the hearth which was always located here. The shape of the room was no longer round but rectangular, and there was an opening (the *compluvium*) in the center of the roof which sloped inward so that the rain water drained into a small pool (the *impluvium*) sunk in the floor beneath. The atrium might be the only apartment in the house or it might be surrounded by others usually less important, but it was nearly always found in the Roman dwelling, whether rich or poor. Family life centered about it; here all the household work, such as spinning and weaving was done; here the family meals were taken. The *Lares* and *Penates* were kept here as was also the money chest of the master of the house. Sometimes there was a small garden behind the atrium, while fronting the street were small shops (*tabernae*) on each side of the entrance.

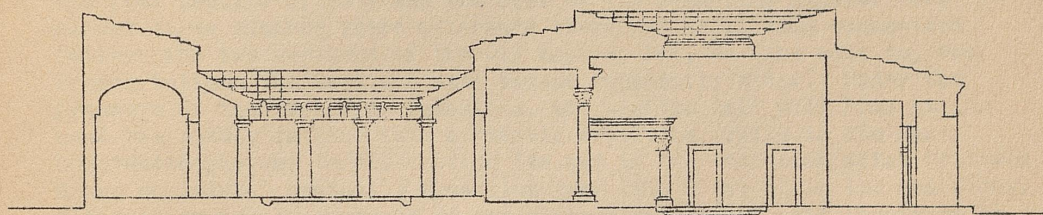
As the Romans became more wealthy and began to travel, Greek ideas began to influence domestic architecture. The most important change was the addition of a whole new section consisting of an open courtyard (the *peristylum*) surrounded by a colonnade and more rooms. Our example, one of the smaller middle class houses at Pompeii, illustrates this development in Roman housing. (See Figure 13.) At the en-

Figure 13.



trance of the house is a vestibule which gives access to the atrium, on either side of which are waiting and reception rooms for clients, solicitors, and friends. Between the atrium and the peristylum was the tablinum or library, which was not a place to which the Roman citizen retired for pleasure but merely a storehouse for books which were supposed to be part of the possessions of every respectable Roman. The peristylum itself was planted with flowers and adorned with statuary and fountains. Off this court were the private apartments of the family - the sleeping rooms, the triclinium or dining room, and the eredra (also a feature of the late Greek house) which was used as a sort of out-door living room. At the back of the house was the xystus or garden. It is noticeable that the emphasis has shifted from the atrium in the older Roman house to the peristylum in the newer type. (See Figure 14.)

Figure 14.



S E C T I O N A - A

The houses of the very wealthy Romans were nearly always elaborations of this general type. They included, very often, picture galleries, libraries, private baths and swimming pools, several dining rooms and banqueting halls, many bedrooms (some of which could be entirely shut off from noise and light), others which were filled with sun light all day long, and others (heated with hot air) used only in winter, great reception rooms, and elaborate formal gardens. These houses were furnished with the greatest luxury and the walls adorned with mural paintings and rare fabrics and embroideries. Window glass was common, although it was not found in the poorer houses. Roman houses were heated by a species of furnace known as a hypocaust which consisted of a large fire chamber and a series of pipes which carried heated air beneath the floor slabs of the various rooms and thus warmed them. It can be seen that the Romans employed a more comfortable domestic existence than any which had yet been known in the Western World

As the Roman country villas are not exactly pertinent to this discussion we will leave them until later when we take up the early Italian villa of the Renaissance.

The poorer classes of Rome lived in great blocks of tenements known as insulae or "islands" which were rented at a fairly high rate. Although Roman houses were, as a rule, constructed of stone these insulae were built of wood in a rather flimsy fashion, a fact that made them dangerous in case of fire or earthquake.

With the Roman house, we reach a high point in the development of the home in the Mediterranean world. Only in the Eastern or Byzantine empire was the Roman tradition continued after the fall of Rome itself.

The Byzantine House

In 330 A.D. the Roman emperor Constantine moved the capital of the empire from Rome to Constantinople and from that date we must reckon the real decline of Rome and the rise of the Byzantine Empire. For almost three hundred years afterward there was still some connection between the two sections of the Old Empire, but, as time went on, the breach between the East and West became constantly wider. Under the pressure of the barbarian invasions, the western half with Rome at its head was slowly falling into a chaotic condition, while in the east Constantinople was barely holding its own in the confusion which followed Roman dominion. Gradually Byzantium grew into a nation in its own right. Although in the long course of its history the empire held itself to be the direct heir of all Roman power and tradition, it was really more Oriental than European, and in language and culture more Greek than Roman.

In Byzantine history, we can observe periods when the empire was brilliant and powerful under strong leaders, and epochs of weakness and anarchy when it seemed that the state would be overthrown completely. With Justinian (527-565) we have the first Golden Age of Byzantine history and art. This remarkable man by his conquests again made the Mediterranean a Roman lake. He is at once the last great Roman emperor and the first great ruler of the Byzantine group. He raised the empire to a great height of brilliance and power. As in all such periods, art flourished, but it was not the old art of Rome. In architecture, which alone concerns us, the influence of the East, of Syria, and of Persia, is extremely marked. The great church of Hagia Sophia at Constantinople is the finest monument of this age, or of any age for that matter. It is a marvel of construction with its great dome supported on pendentives (a method of constructing a round dome over a square structure, which was first used, apparently in the East)

and the superb decorations of the interior. This concentration of rich ornament--mosaic, sculpture, fine marble inlay - in the interior of a building, whether it be church or house, is one of the marked characteristics of Eastern Christian art.

After the death of Justinian, the empire passed through a rather checkered period, now weakened under bad rulers, now enjoying years of renewed vigor. In the 8th and 9th centuries occurred the tumults of the Iconoclastic Controversy (a revolt against the use of images in the Eastern church), which had the bad effect of limiting artistic production. Byzantine art entered on a second Golden Age with the advent of the Macedonian dynasty (867-1081). The Macedonian emperors were vigorous, strong-willed men who were responsible for this great revival of Byzantine power. With the restoration of some measure of peace and prosperity to the Empire and the relaxation of the repressive influence of the Iconoclasts we have the beginning of a second Golden Age in Byzantine art. In the architecture of this period an interest in exterior ornament becomes apparent--an ornament, however, which depends for its effect on the surface patterns of brick and stone - a fact which is exemplified in the house we illustrate.

With the dynasty of the Comneni (1081-1204) we have another brilliant period, but the glory of the Empire had begun to fade and the capture of Constantinople by the Crusaders in 1204 was a blow from which it never recovered. The territories of Byzantium dwindled until there was little left but Constantinople itself. The end came in 1453 when the city was captured by the Seljuk Turks who made it the capital of the Ottoman dominions. For a thousand years the Empire had been not only the bulwark of Christianity in the East, but also it had kept alive the great traditions of Classical culture until Europe was ready for them again. Byzantine art, which is too often considered a dead static art by the superficial observer, was really an art of great vitality within, of course, its own circumscribed limits. Nowadays we are able to see that an art which does not mirror the natural world with the greatest amount of technical facility, is not necessarily inferior to the artistic expression of a period in which the ideal, if one may call it such, is the main goal. A good Byzantine mosaic may be as great, in its way, as a Renaissance painting. Similarly, a great Byzantine church like Hagia Sophia is comparable to any Gothic Cathedral, both in construction and decoration.

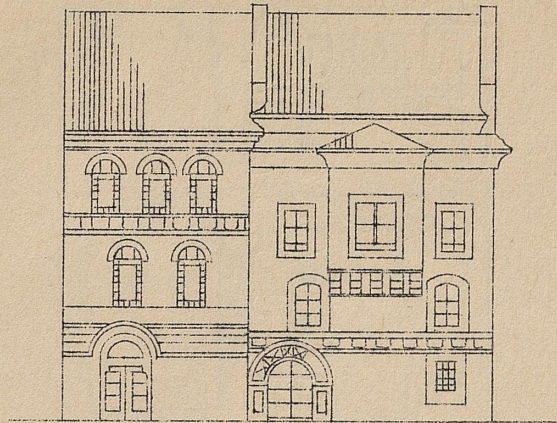
To return to our discussion of the house, we find, in attempting to treat the subject, a certain paucity of information. There is very little actually extant and what does remain is of a very late period. Literary sources and a few houses at Constantinople of the

last years of the Empire are our chief sources of information. Experts are uncertain about the exact date of even these (various authorities assign dates either shortly before and even as much as a hundred years after the Turkish conquest). The Turks, who had no architectural traditions of their own, built in the Byzantine manner, so that some information can be obtained from their constructions. Manuscript illumination and mosaics also supply us with a number of details, but when everything has been examined, the information concerning the Byzantine house is still surprisingly meagre.

It stands to reason that in the thousand years of Byzantine history, the form of the house must have been subject to many changes. It has already been mentioned that the Byzantine house, in the early period of the Empire, continued the Roman tradition to some extent. From the time of Constantine to that of Justinian the Byzantine home of the better class followed the example of the patrician Roman house which we have just discussed. At the same time, however, an oriental type of house made its appearance - ruined examples of which are still extant in Syria. These Syrian dwellings had two or three stories, sometimes a central court, and a portico in the facade. In Constantinople, houses built after this fashion became the accepted type, although according to many manuscript illuminations, there was considerable variation in form. At Melnic in Macedonia is a fully developed provincial building of this sort, in which, however, the central court has been roofed, forming a large interior room containing the staircase. This house dating from the 10th or 11th century has been so changed in the course of time that little idea of Byzantine domestic arrangements can be gained from it.

In the Phanar quarter of Constantinople there are still extant a few fast-decaying houses of the late Empire or the early period of the Turkish dominion. Due to the crowded condition of the city encased in its walls, the streets were little more than alleys, and the houses tended to be rather high and narrow. We illustrate one of these houses. (See Figure 15 on the following page.)

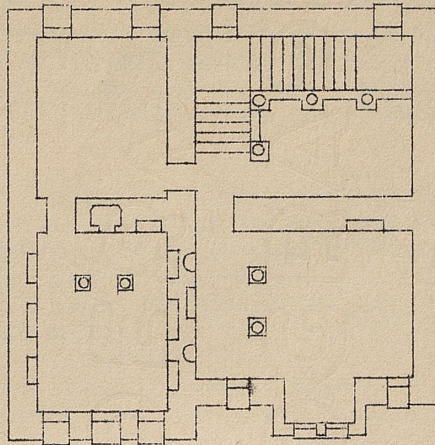
Figure 15.



The projecting upper stories supported by heavy corbels are perhaps the most noteworthy features of the facade. Crowded conditions were again, as in most of medieval Europe, responsible for these projections. The alternate courses of brick and stone of which the walls are constructed are characteristic of later Byzantine architecture. The Byzantine private house was rarely more than two or three stories high, with sometimes a flat terraced roof, but often having, as in our illustration, sloping roofs covered with tiles. Windows were glazed and often heavily barred. Doors were made of carved or metal-encrusted wood and sometimes of bronze, but in the interiors, hangings were used extensively.

The interiors of these houses varied considerably. In our example, the building is entered by a vestibule, perhaps a development of the earlier Syrian portico. (See Figure 16 on the following page.)

Figure 16.



There is no evidence here of the large room derived from the old interior court which had also been a feature of the Syrian type, and the staircase is contained in a smaller room at the back of the building. The main apartments of the upper floors were very often vaulted with cupolas and adorned with columns and niches. The walls and vaulted ceilings were covered with mosaics and frescoes and often hung with rich stuffs. All the living and reception rooms were richly and luxuriously furnished.

On the whole the Byzantine house was a much more luxurious affair than any that could be found in Western Europe during the Middle Ages.

The Northern Tradition of Wooden Construction: Saxon Shelter

We must now return to Western Europe where the development of domestic architecture followed an entirely different course. The disintegration of the Roman Empire had begun sometime before the capture of Rome by the Goths in 476. Long before this the Roman government had allowed large groups of barbarian tribes to settle within the boundaries of the Empire where they either became so softened by Roman civilization that they were useless as a defensive group or they were a constant source of trouble to the government. The border provinces of the Empire began to drop away, falling rapidly into a chaotic condition -- Britain, Gaul, Spain, and finally Italy, itself were overrun by roving barbarian tribes.

These tribes led a different kind of life from that of the Romans or the Romanized people of the northern provinces. They did not live in cities, but fixed their independent dwellings wherever natural circumstances would permit. They built, as a rule, round huts which were rather low in height, constructed of rough timber and having a roof of thatched straw which was pierced in the center to let out the smoke from the fire. They were a rough, hardy people, uncivilized and uneducated, but they possessed some standards of personal virtue. Hunting and war were their chief occupations; the care of their homes and families was left to the women and the slaves.

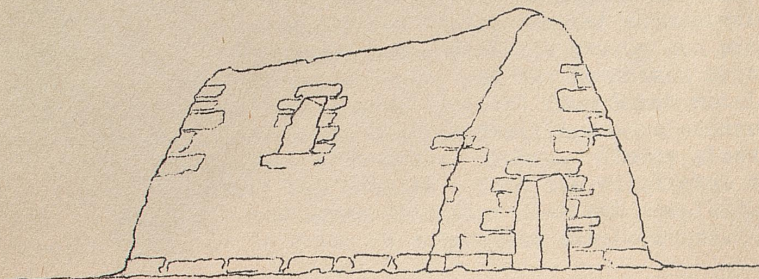
Building in stone was not natural to these people; stone was much too permanent a building material for these who were not used to living in one place for long - a fact which is easily proven when one considers the vast migrations of barbarian tribes over the face of Europe at the time of the downfall of the Roman Empire. True, these migratory groups finally settled in some particular spot and became part of the fields they had invaded. With these people went their building tradition - and that tradition, as among all the peoples of northern Europe, was essentially one of wooden construction. The barbarians who settled in Italy or Spain or any of the more thoroughly Romanized sections of the old Empire adopted the traditions of the Romans, but in northern countries the wooden tradition always remained important even after stone had become, in the Middle Ages, a common building material.

We cannot follow all the manifestations of barbarian building traditions, but it would probably be especially interesting to consider the development of shelter in Britain, not only because the principle of wooden construction played a large part in it, but also because of the fact that the English traditions of domestic building, which were imported into the United States, have a special interest for Americans.

Cowland

We have already discussed the shelter of England during the Pre-historic period, but it will not be amiss to glance at it briefly here, in order to provide a background for our treatment of later developments. The pit shelters and lake dwellings of Neolithic times have already been described (see section on Pre-historic shelter), so that we need not concern ourselves with them, save to note one of the first manifestations of the wooden building tradition in the lacustrine huts. With the Celts or Britons we have a more highly developed civilization. As we have said previously, the British lived in villages consisting of narrow streets lined with round huts built of wood or stone. Many of these huts resemble the modern charcoal burner's shelters of England or the "wigwams" of the early English settlers (see American handbook). They were constructed of poles interlaced with brushwood in the form of a cone, the whole being covered with sods. There were also stone huts built in the form of beehives (see Pre-historic section). We illustrate here a later development of the stone beehive type (c. 700 A.D.), the so-called Gallerus oratory which is a small hut of the kind found in the early Christian monasteries of Ireland, a fact which proves that it remained in use well into the Christian era. See Figure 17.

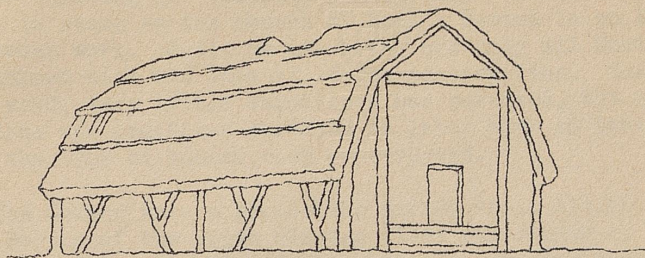
Figure 17.



Concord

Addy advances the view that these Irish huts are developments of a wood and turf boat-shaped type of house. With this argument in mind, one should look at the Saxon hall (Figure 18) and one will see that there is a cer-

Figure 18.



tain similarity in form. These dwellings usually consisted of only one room which contained the hearth; sometimes a sort of cellar (to be used as a storeroom or a would-be excavated place of shelter) beneath the floor.

The Britons not only resisted the Roman conquest, they also resisted Roman civilization to a large degree. A number of them, however, and those mostly of the wealthier class, adapted themselves to Roman methods of living. The Roman house with its atrium and peristylum was unsuited to the northern climate, and the Romanized Briton usually built his house, in some degree imitated from Roman models, with his own needs in mind. These Roman-British dwellings were constructed of brick, concrete, and plaster with mosaic floors. Window glass and painted wall decorations were not unknown. With the withdrawal of the Roman legions in 420, A.D., the Roman tradition died out completely in Britain, leaving little or no trace in subsequent developments.

Various barbarian tribes from the Baltic, the Angles, Saxons, and Jutes, began to settle in England. These tribes quickly overran the country and Britain became Anglo-Saxon. At first, the Saxons were a roving, war-like people, with little idea of law and order, but they later settled down and became an agricultural people. England was split up into several kingdoms: it was not until the 9th Century that one man, Egbert, King of Wessex, first bore the title of "King of the English". The Saxons evolved a rough sort of feudal system based on land tenure with the kings and nobles at the top, the thralls or slaves at the

bottom and two middle ranks - the churls who owned some property and the laets who had no property rights. From this beginning grew the later English manorial system. Christianity was introduced into the country in the late 6th and 7th Centuries. It was this rough civilization that endured in England until the Norman Conquest in 1066.

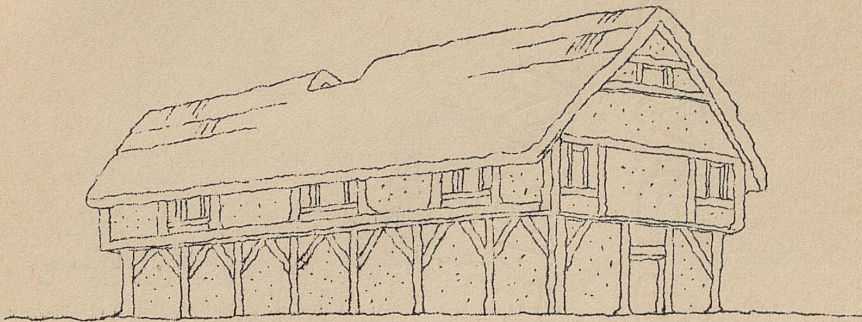
The Saxons built almost exclusively in wood, in fact the Saxon word for building is "timbriam", literally "timber". Even such late building in stone as the church of Earl's Barton is an imitation of earlier wooden work. Again we see how thoroughly all North European building is imbued with the idea of wooden construction. Because of the material used, very little Saxon work has survived, but many of their traditions and practices survived in later work so that we have some idea of the type of houses they constructed.

The Saxons were a people who gained their living by agriculture and the people of the upper classes lived surrounded by their servants, slaves, farmers, and domestic animals. On the family estate a central home or "ham" was erected. The ham was surrounded by an earthen wall and a ditch. The main building was the hall (heal), a large wooden construction, about which were grouped smaller buildings known as burs (bowers or chambers). We illustrate a typical early Saxon hall, which is smaller than the more elaborate type found later in England and Iceland. Bemis and Burchard describes a typical hall in a passage which we may as well quote - "The hall lay east and west with a door in the western end. It was constructed with a framework of wood filled with kneaded clay. The roof was a layer of birch bark over the beams and covering this were sods cut so thick that grass and weeds went on growing. The side walls were low: and goats, sheep, and even pigs might graze on the roof. The lintel of the door was so low and the threshold so high that one had to stoop his head and lift his foot as he came in. The window (wind's eye) was an opening in the center of the roof and was the most vulnerable part of the building.....The hall itself was one large room with simple furniture, usually fastened down or built in. The principle piece of furniture was the long seat which ran close to the north and south walls and sometimes across the east gable as well. The middle of the long seat was higher than the rest. It was called the high seat and was occupied by the master of the Hall and his wife. Sometimes a second seat might be provided opposite the master for distinguished guests. These seats were the most comfortable as they were built opposite the fire which was built in the center of the Hall on flat stones.....The burs when they existed at all were used as sleeping apartments for the women. The Hall is the essential feature which persists throughout the entire early development of the English house." We have spoken of the Hall at some length, because we shall have occasion to refer to it in discussing later domestic architecture in England.

Courtesy of the British Museum

The Saxon cruck house (see Fig. 19.) is another manifestation of

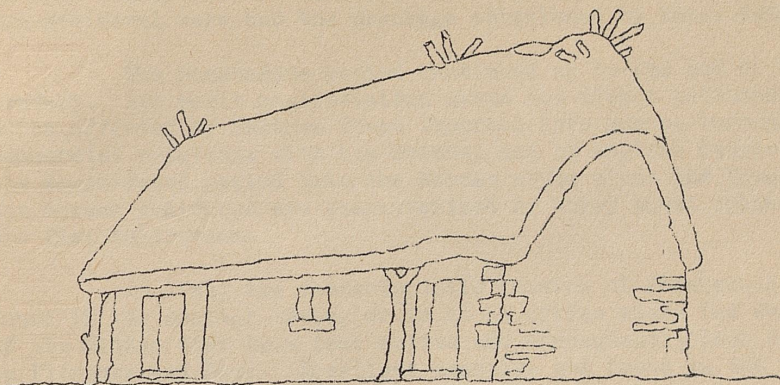
Figure 19.



the wooden building tradition of the North. In the simplest form of the cruck house, the natural shape of curved tree trunk is utilized, eliminating the necessity for an elaborate system of supporting beams in the roof. The timbers were set up in the form of a letter A, with or without the cross-piece which was used as a brace. The cruck idea played a prominent part in Saxon building methods: they used the crucks in pairs to support the roof and filled in the side walls with wattles, wicker or hurdle work covered with mud or clay. When these structures, which were rectangular in form, became larger and needed increased support for the roof, the interior was divided by upright posts into a main central section with an aisle on either side. The family lived in the main part and the cattle were sheltered in the aisles. These houses were extremely rough and rude: the floors consisted of trodden earth covered with reeds, the windows were shuttered at night, and there was little furniture even of the plainest description. Sometimes, several families lived in one of these dwellings.

The rough farm house which we illustrate (Fig. 20) was of a type known to the Saxons. The walls were of stone which helped to

Figure 20.



support the roof of plaited twigs and turf - a covering that was also sustained by unhewn crucks and internal posts. In one end of the hut were kept the domestic animals, while in the other, and separated from the first part by a mud-plastered partition, were the family quarters where there was a hearth and rough chimney composed of wickerwork daubed with clay.

Some authorities on early Northern housing, such as Addy, see a resemblance between the construction of the cruck type of house and that of the ships used by these early barbarian tribes. It is highly probable that the Saxon method of framing a house was one that they first used in building their sea-going vessels. The argument has even been advanced that the germ of the pointed Gothic arch is to be found in the cruck.

Romanesque Architecture in Europe.

The fall of the Roman Empire in the West in the year 476 A.D., with the election of Odoacer as King of Italy, brought to an end the unified administrative control that had been exerted over Western Europe from the Mediterranean to the Rhine and the English Channel from the time of Caesar. In a political sense, the Empire broke up into a confusion of small kingdoms and later into the powerful city states. With the rise of the great monastic establishments, economic and temporal, as well as spiritual control passed into their hands, and through them was vested in the papal authority in Rome.

Combs I

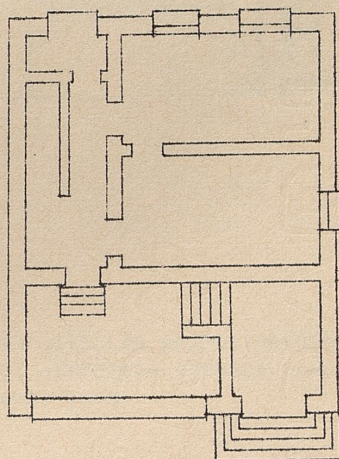
All that was left of the old Roman civilization was a vast multitude of its monuments and buildings, some partly ruined, some in their original condition, but largely unoccupied and unused. From these the builder of the Romanesque era just dawning collected fragments with which to erect new structures adapted to his needs. The detail and character of the ancient remnants provided inspiration for the new, and gradually there were evolved new methods and mannerisms, based upon the old Roman tradition. The painter-etcher Piranesi, in his many volumes of large plates, has given us some conception of the state of the Roman remains after the ravages of the mediaeval wars and the wreckage occasioned by later builders.

The Romanesque period continued up to the end of the twelfth century. Its early manifestation shows the direct influence of Rome, later to be affected by Eastern ideas imported into Europe through extensive commercial relations with the Orient, and in England developing through the Anglo-Saxon period into the Norman style after the Conquest in 1066. The Norman buildings are characterized by heavy squat cylindrical piers and flat buttresses.

In Italy the characteristic remains of Romanesque homes are found in the smaller towns, or in those cities where the warring factions of the Middle Ages were less active and consequently less destructive than in Florence and Rome. Excellent examples are found in the Tuscan hill town of Viterbo, which by its isolated location was also remote from the disastrous transformations instigated by wealthy and politically powerful families.

In the Viterbo house illustrated (See Figure 21) the principal

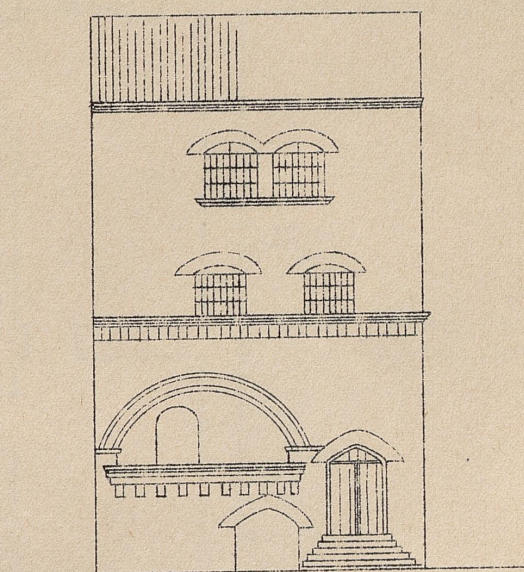
Figure 21.



feature of the plan is a broad, open loggia covered with a low segmental arch, and a slightly projecting balcony front. A plain doorway at the side opens into an entry, from which a short stair leads to the balcony.

On the front above this story is a decorated string course on close-set corbels, which as well as the balcony and the archivolt of the loggia arch is ornamented with nail-head detail. (See Figure 22). Low

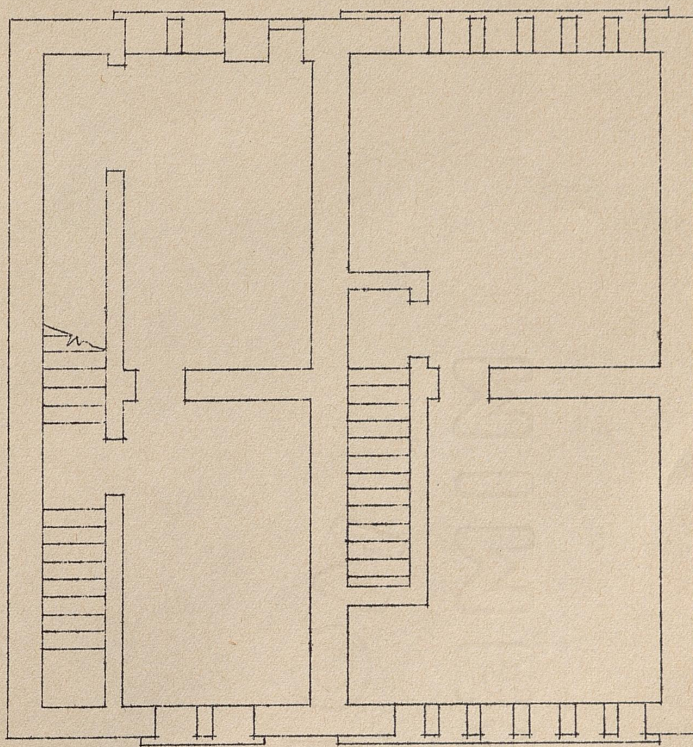
Figure 22.



upper stories are plain with two segment-arched windows in each. A broad projecting eave without elaborate cornice completes the facade. The house is built of dark volcanic tufa.

In the French Romanesque town houses at Cluny, the seat of the great monastic order of the Cluniacs, the illustrations given show a simpler type of plan two rooms deep, with stairs to the upper floor opening almost directly from the street (See Figure 23).

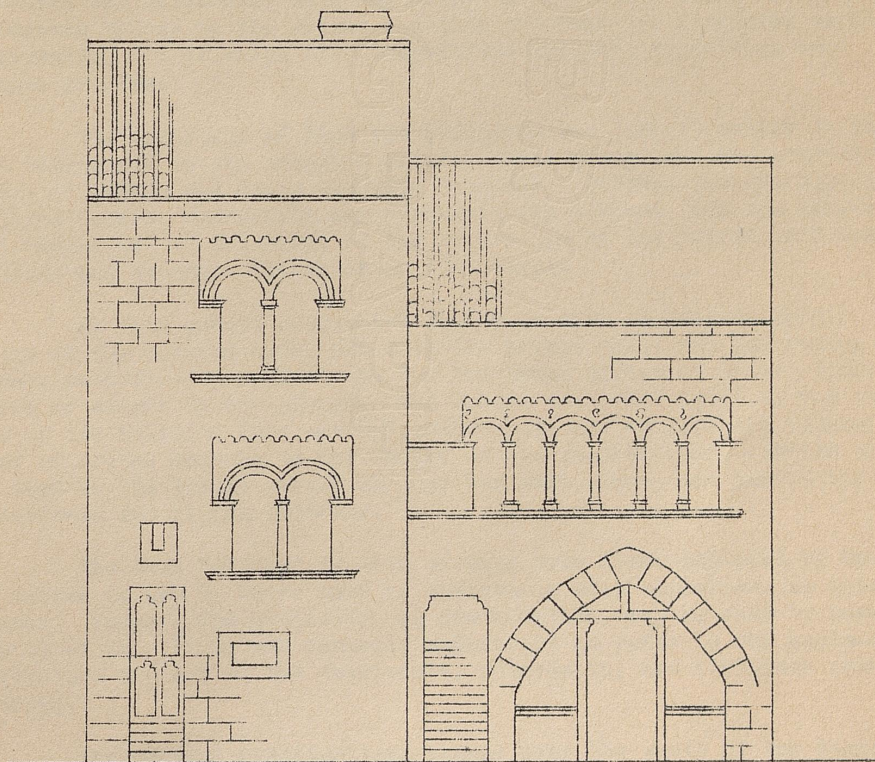
Figure 23.



Carthage

The fronts of these houses are ornamented with arcaded openings with round columns. A hint of the transition toward the Gothic is shown in the pointed arch enclosing the first floor shop-front (See Figure 24).

Figure 24.



THE GOTHIC PERIOD

By the end of the twelfth century the Latin races had developed into independent kingdoms. Germany was welded into a unit under the Holy Roman Empire of the German people: England, under the descendants of William the Conqueror, had large holdings in France by virtue of the Norman origin of her rulers, and was therefore deeply immersed in the affairs of Continental Europe. France was controlled partly by her kings and partly by the Duchy of Burgundy.

Flanders and the Low Countries were entering upon the phase of commercial supremacy that a little later made them the bankers of Europe, and Venice was developing into the powerful city state whose trade rivalled the caravan routes to the Orient and made the Doge the financial backer of the Crusades, out of which his close-fisted merchant associates made enormous profits.

The ownership of land and buildings was largely vested in the great nobles and in the monastic orders, whose grasp upon the economic affairs of Europe was daily becoming stronger. Between the two classes the Third Estate, comprising the merchant, the artisan, and the laborer found themselves at the mercy of the militarism of the feudal lord and the spiritual and economic dictation of the clergy.

At this period originated the style that we know as Gothic, with its use of the pointed arch, and with the ribbed vault and the flying buttress substituting equilibrium for the Roman system of direct transmission of weight to the ground. The Gothic architect split up the roof loads of his building into several components, and by opposing counter thrust of arched masonry to the thrust of his vaulted roof, carried his roof load to the ground partly through the wall piers, and partly through the buttress and flying buttress.

The term "Gothic" is said to have been first employed by Raphael in a letter to Leo X, being used as synonymous with barbarous, as opposed to Roman. Vasari, the historian, by its adoption, may be said to have perpetuated it. It is now commonly understood to refer to the mediaeval architecture and art of the thirteenth, fourteenth, and fifteenth centuries in Europe.

Its various ramifications spread over the whole of the European continent, except in the Slav and Scandinavian areas, which were hardly affected by the new structural and aesthetic influences which predominated elsewhere.

Certain factors exerted definite influences in the development of the new style. Local materials affected its evolution in different areas; the marbles of Italy; the stone of France and England; the brick and burned clays of Lombardy and Flanders. The military organization of

Rome was no longer in existence to compel slave labor to quarry and transport large blocks of material. Stone had to be carried long distances, probably by pack-horse, and the laborer might be called at any moment by his lord to render feudal service. Consequently Gothic building became an architecture of small units, in contrast with the Roman use of monumental masonry.

The climate of the different sections of the continent set its mark upon the structures of the time. In the south the broad cornice and small window still gave protection from the sun; in the north heavy snow-fall promoted the use of steep roof pitches, and the place of the wall was taken by great areas of stained and painted glass.

The power of the popes, the increase in numbers of the clergy, and the wealth of the monastic orders made the ecclesiastic building the outstanding feature of the style upon which all the ingenuity of design and craftsmanship were lavished; while the growth of towns and of trade and commercial activity was productive of a rivalry that expressed itself in the erection of large and costly secular structures.

The great architects of this period were members of the monastic orders. William of Sens, came over to England from France in 1174 to re-build the Norman choir of Anselm at Canterbury, which had been destroyed by fire. His work was continued by another monk, William the Englishman. Craftsmanship reached a high point in the erection of Gothic buildings, for the stone-carver, the worker in wood, the glass designer and painter, and the maker of wrought iron not only were encouraged to achieve results that are unequalled to-day, but were allowed to use their own imaginative faculties in the execution of detail.

While the structural principles involved in the Gothic system of roof and vault support were carried out in practice to a length that almost exceeded a reasonable margin of safety, yet no record exists to show that there was any preliminary mathematical or technical engineering design, but only a method of trial and error. Occasionally there was a failure, due to faulty construction. When the great lantern over the crossing of Ely collapsed in the nineteenth century, it was found that each of the eight supporting piers consisted of a mere skin of cut stone, filled in with loose rubbish.

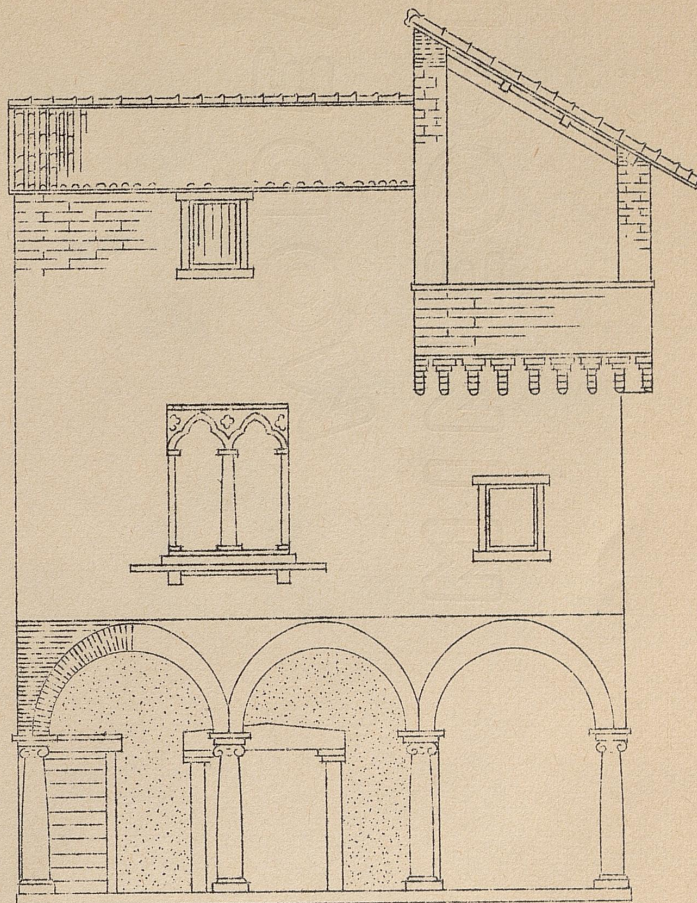
In the English buildings, the early roof construction was entirely of wood. The widespread use of the masonry vault was largely a fireproofing measure, as a large number of destructive fires destroyed many structures in which timber was employed.

The Oriental influence which became a prominent feature of Gothic art is directly attributable to commercial relations with the East, and to the permanent contacts with Asiatic civilization established during the Crusades. An analogy is found in the popularity of the French farm house as source material for domestic buildings in America after the World War.

It is generally conceded that the earliest example of the Gothic style, dated 1115, is to be found at Morienval, in the Ile de France, though pointed arches and ogival vaults of the beginning of the twelfth century have been discovered in Picardy and in the transition work in Durham Cathedral.

Among the Continental lands, Italy was least influenced by the new art. Italian buildings retained to a considerable degree their earlier Romanesque form, the Gothic impulse showing itself chiefly in detail. In the thirteenth century house at Rome shown in Figure 25 the first floor

Figure 25.

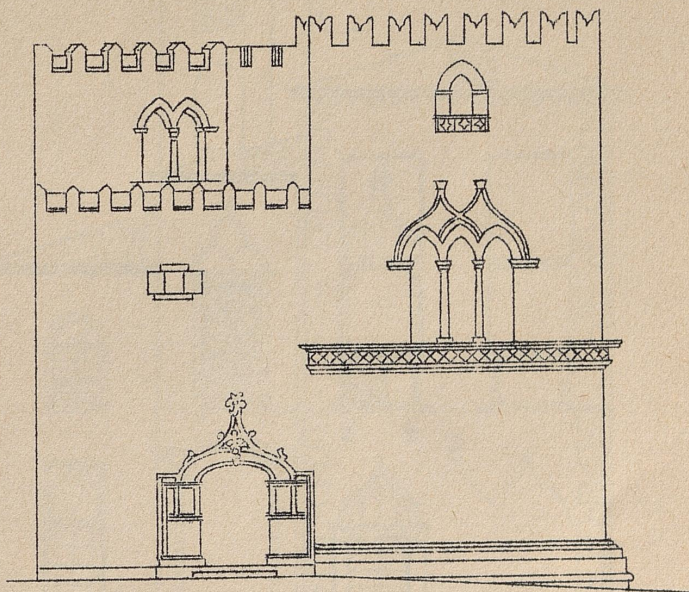


arcade, with columns directly supporting round brick arches, has a definitely Romanesque character, and the small window openings and overhanging eaves betoken the climatic influence common to Southern architecture, not only of the Gothic period, but also in the Romanesque and Renaissance times. But for the windows with Gothic arches and colonnettes, this house might be considered as

belonging in all three styles.

The crenellated architecture of the houses at Taormina
(See Figure 26)

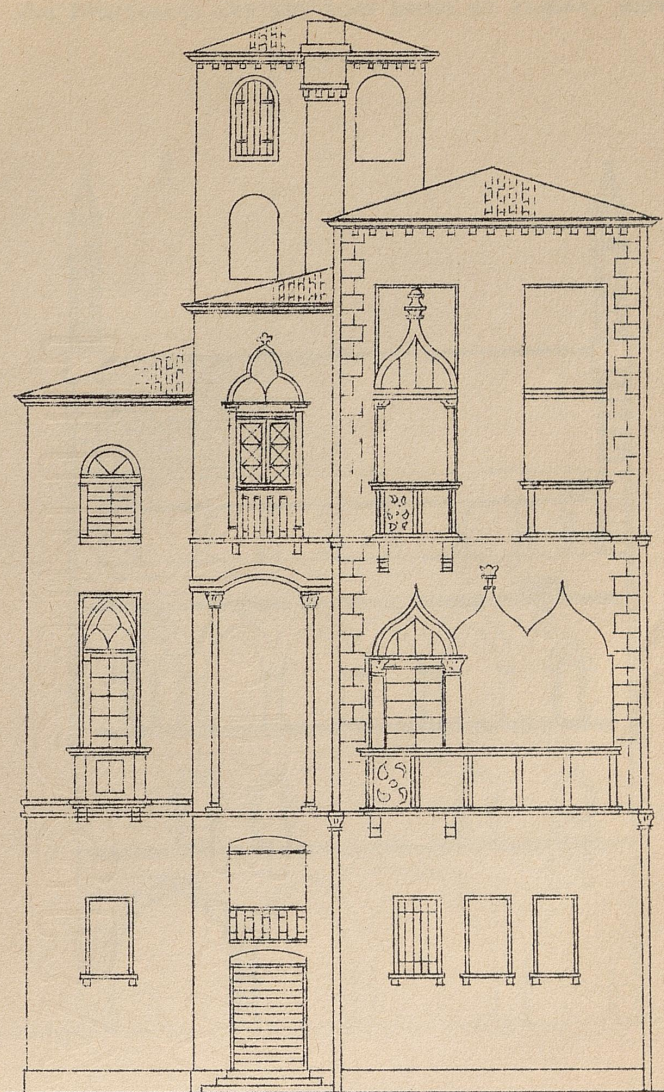
Figure 26.



reflects a manner of building necessary in a country where life was more primitive, where violent personal and family feuds were a part of everyday existence, and where a man's house must be in a large degree his castle. Here again the Gothic detail is concentrated in door and window openings, with an ornamental string course at the second floor level filled with a mosaic in colored marbles.

In the late Gothic Palazzo Contarini - Fasan, at Venice, on the Grand Canal (See Figure 27), the concentration of flamboyant and three

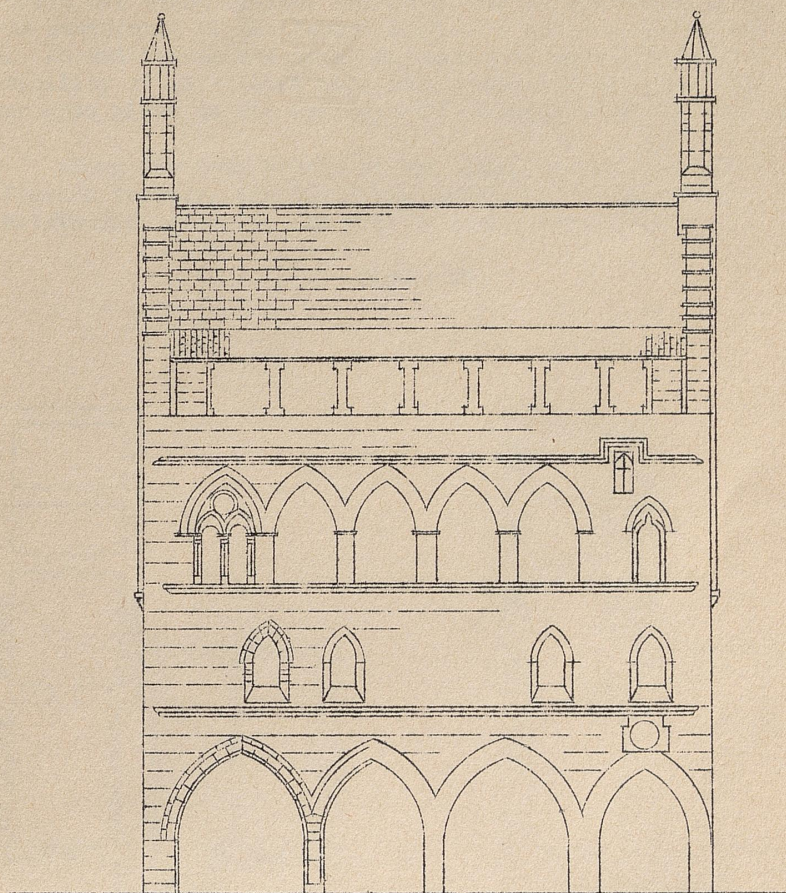
Figure 27.



centered traceried arches produces a general impression of decidedly Saracenic character. The Venetian houses are indicative of the wealth of the powerful city state and of the close association of its opulent merchant princes with the Orient.

Domestic architecture in France achieved a higher level of design in this period. The castle of Pierrefonds, the Hôtel de Cluny in Paris and the house of the banker Jacques Coeur at Bourges, are instances of its most interesting development.

The Fourteenth Century town house at Figeac, shown in Figure 28,
Figure 28.



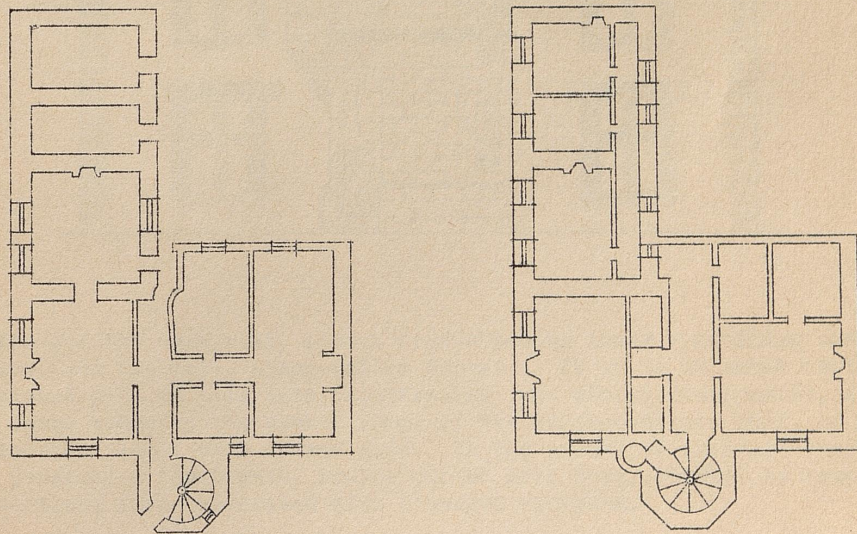
belongs to the second or Rayonnant period of French Gothic, corresponding to the English Decorated manner. It is a four-story merchant's residence, with a series of shops with arcaded fronts on the street. The house entrance through the smallest arch leads to an open court and stair in the rear of the building. The second floor contains small, chamfered windows, and was probably

used as quarters for the servants and shop assistants. The third or principal story expresses itself on the facade in a highly ornamented arcade, the openings filled with twin pointed trefoil arches with a cinque-foil over, enclosed by a pointed arched mould with leaf ornament. The top floor contains a loggia protected by a broad projecting eave carried on heavy timber brackets.

The fifteenth century, bringing with it the use of gunpowder, and the development of a new social order saw the extinction of defensive architecture in domestic work. The castle, which had resisted the catapult, could not stand against the breaching of its walls by cannon fire. Also the ascendancy of the feudal lord as a great military chief had passed. He had become the grand seigneur, to whom the amenities and social responsibility of life meant more than victories at arms. The Morte d'Arthur gave place to the contemplative essays of Michel de Montaigne.

Among the town houses of the late, or Gothique fleuri period of the fifteenth century, the so-called Presbytery of the Trinity, at Vendôme, is an outstanding example. In plan it has a center hall, with an ell at

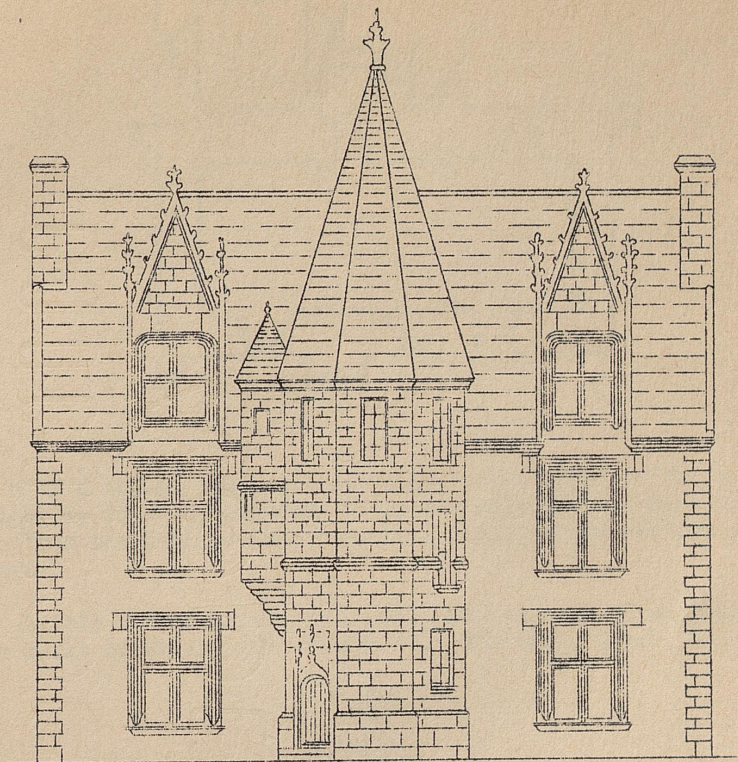
Figure 29.



one side. The main floor contains dining room, kitchen, library, and services. The second floor includes two salons, with a number of sleeping rooms.

In the principal facade, shown in Figure 30, the important

Figure 30

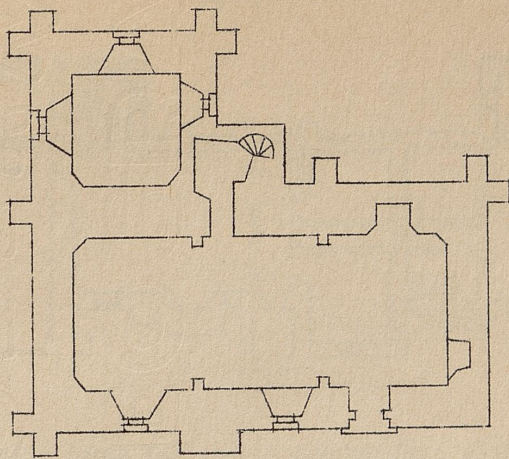


features are the octagonal, almost free-standing tower containing the stairway, and the tall, steep-gabled dormers. It is to be noted that the pointed arch in this late illustration has almost disappeared, its place being taken by the weaker shape of the three-centered head, or by a horizontal lintel with curved ends. In the principal entrance there still persists a flamboyant, double curved arch form, flanked by meaningless buttress forms decorated with flowered crockets.

Beyond any of the European countries, England advanced farther in the development of the home. The central feature of the English house was the hall, which took its origin from the Saxon hall. In the Norman times the manor consisted of the hall, with kitchens at one end and the owner's private apartment or "solar" at the other.

In the Early English period of the thirteenth century the house still retained the defensive character of the earlier castle. One of these, Little Wenham Hall, in Suffolk, is shown in Figure 31. The plan forms an

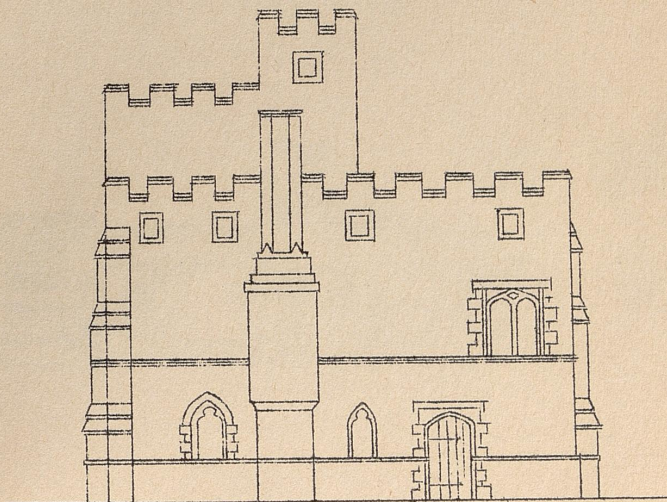
Figure 31.



L-shape, with a square tower and circular turret stair in the angle. The ground floor is vaulted, and over it is the hall with an open timbered flat ceiling. From the hall an arched opening leads to the vaulted square chapel in the tower.

Little Wenham is the earliest known example of an English Gothic structure built of brick. See Figure 32. The hall, tower, and stair turret

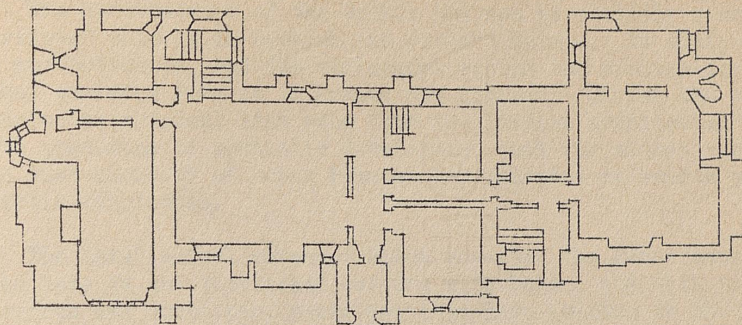
Figure 32.



are flat roofed, with crenellated parapet walls, and all the architectural features trimmed with stone. In detail the building is representative of the best of the Early English work.

The center portion of Haddon Hall is illustrated in Figure 33.

Figure 33.

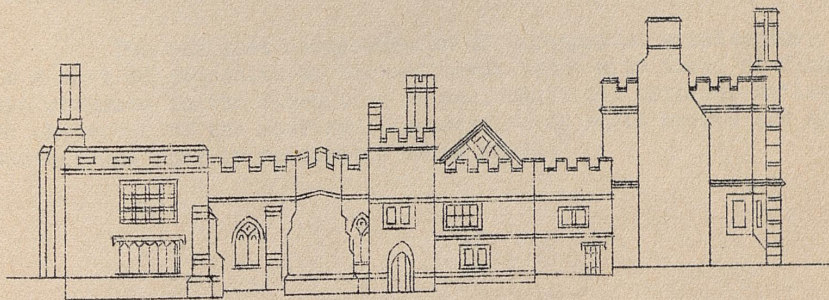


The complete building forms two closed quadrangles, with the hall forming the division between them. The plan shows quite clearly the arrangement of the early type of manor house, with the kitchen and services at the opposite end of the hall from the owner's apartments.

This part of the manor was erected between 1300 and 1380, and therefore falls within the period when the semi-fortified home was still in vogue.

The exterior, showing the entrance tower and the facade facing the lower court, carries out the battlemented parapet, with walls of hammer-dressed stone and cut stone trim. (See Figure 34.)

Figure 34.



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The Renaissance Period

The architecture of the Gothic era was essentially a movement which developed chiefly in central and western Europe. In Italy it was received apathetically, and its employment lacked the spontaneity and spirit that emanated from it in France and England. During the entire Gothic period no original idea came from the Italian architects, and it is one of the phenomena of aesthetic development that for almost a thousand years the vast quantity of Roman remains lay unheeded as source material for stylistic adaptation.

The intellectual movement which preceded the Renaissance in the arts began late in the thirteenth century with Dante, and with his successors, Petrarch and Boccaccio, whose writings gave impetus to the use of Classic literature as prototypes. The capture of Constantinople by the Seljuk Turks (A. D. 1453) caused the emigration of a number of Greek scholars to Europe. Erasmus directed attention to original Biblical texts and to the Greek Classics, by combating the philosophy of the mediaeval mystics.

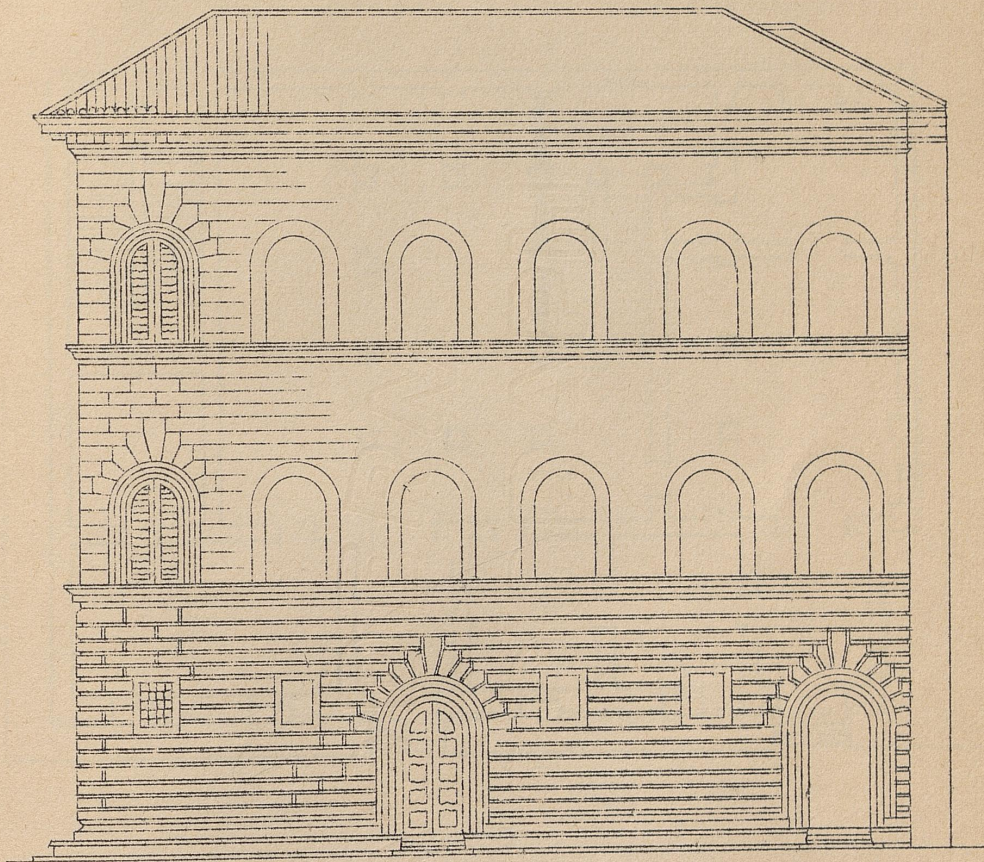
Certain other influences were at work. The invention of the mariner's compass led to exploration, widening the horizon of Europe and developing new trade routes to the East. The new arts of printing and engraving produced a wider diffusion of knowledge. Gunpowder completely revolutionized methods of warfare. The Old Conquerors would have made but little headway against aboriginal peoples without the advantage of the arquebus and the cannon. Astronomy changed the perspective of science by the new conception of the earth's relation to the celestial scheme.

The Reformation, inspired by John Huss in Bohemia, Wycliffe in England, and Luther in Germany, by lessening the power of the Papacy and the more or less decadent monastic orders, fostered the progress of the secular spirit, and turned attention away from ecclesiastic toward civil architecture.

The earliest manifestation of Renaissance architecture in Italy was a sort of composite of the mediaeval forms with those of Classic origin. This occurred in the Florentine palace, where the exterior still preserved the character of the mediaeval fortress, with small barred and shuttered openings and heavily rusticated stone work.

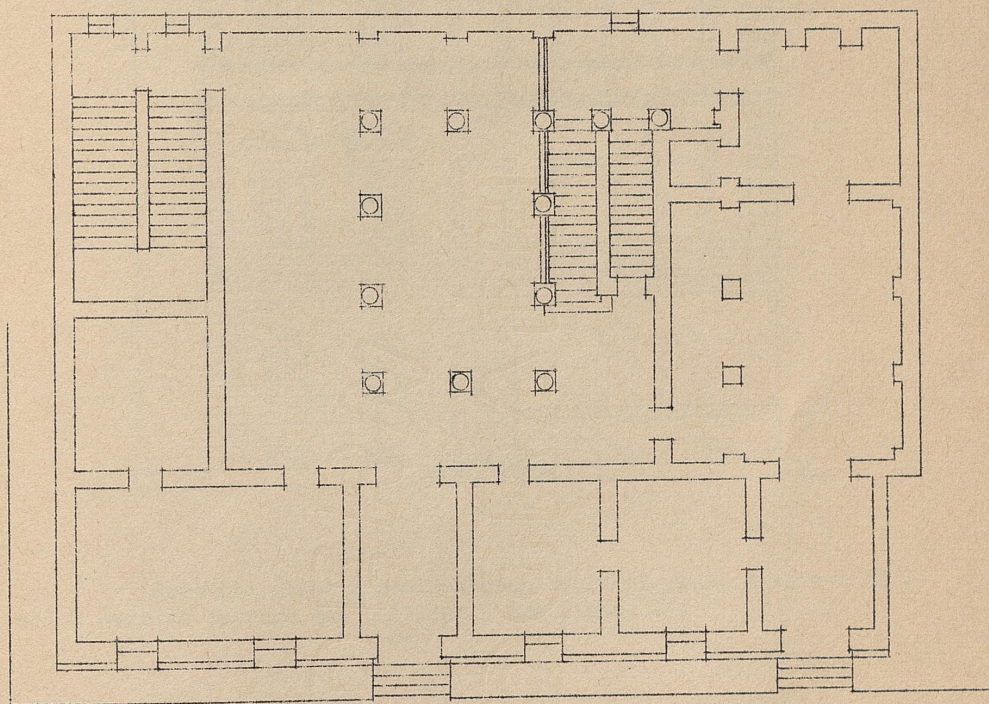
See Figure 35, which shows the principal facade of the Palazzo Gondi,
at Florence.

Figure 35



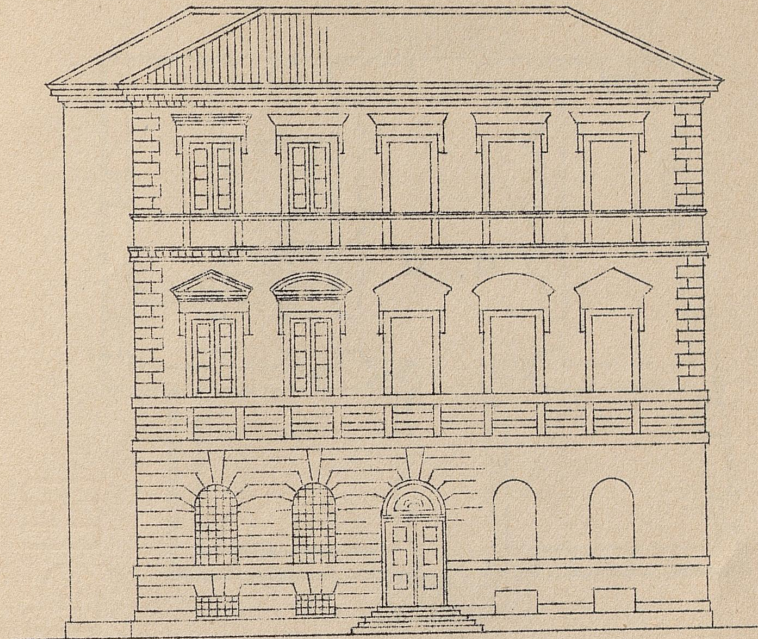
The interior comprises a central court, with columns and arcades supporting open galleries, developed in the antique models, with rooms grouped on three sides. See Figure 35 - A.

Figure 35 - A



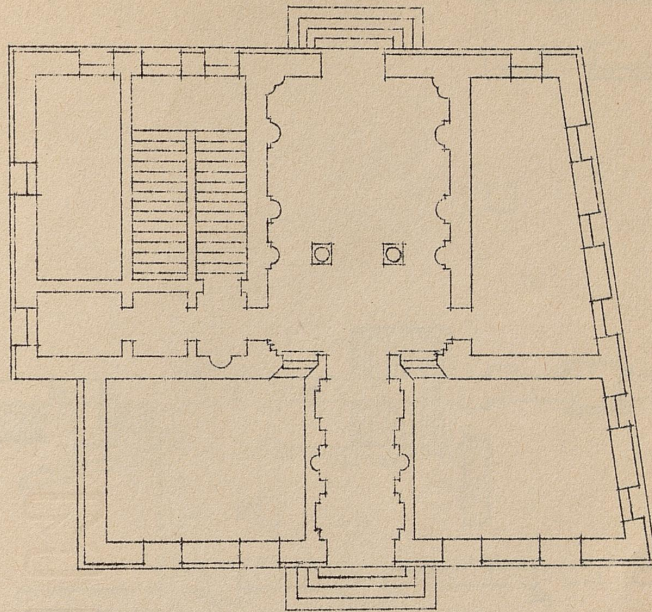
Of a similar character, but with a less forbidding exterior, with greater refinement of exterior detail, is the Palazzo Viccolo del' Aquila at Rome. See Figure 36.

Figure 36



Here one finds a smaller open court in plan, with a circulation carried through the building. See Figure 37.

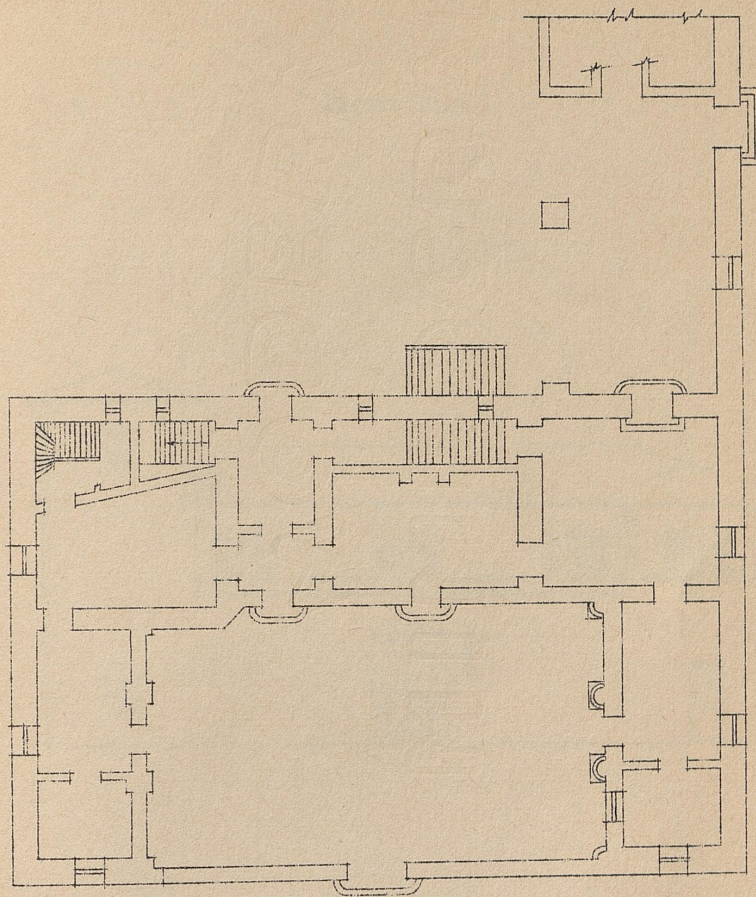
Figure 37.



As the influence of the feudal ascendancy declined, the country house opened up a wider horizon in planning.

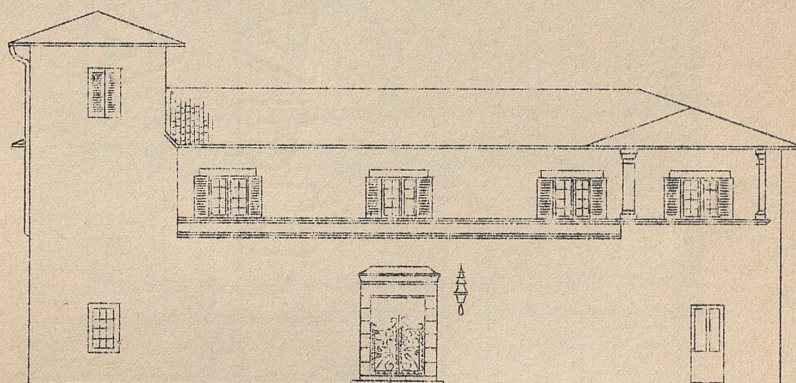
In the Villa Calileo, at Florence, shown in Figure 38,

Figure 38



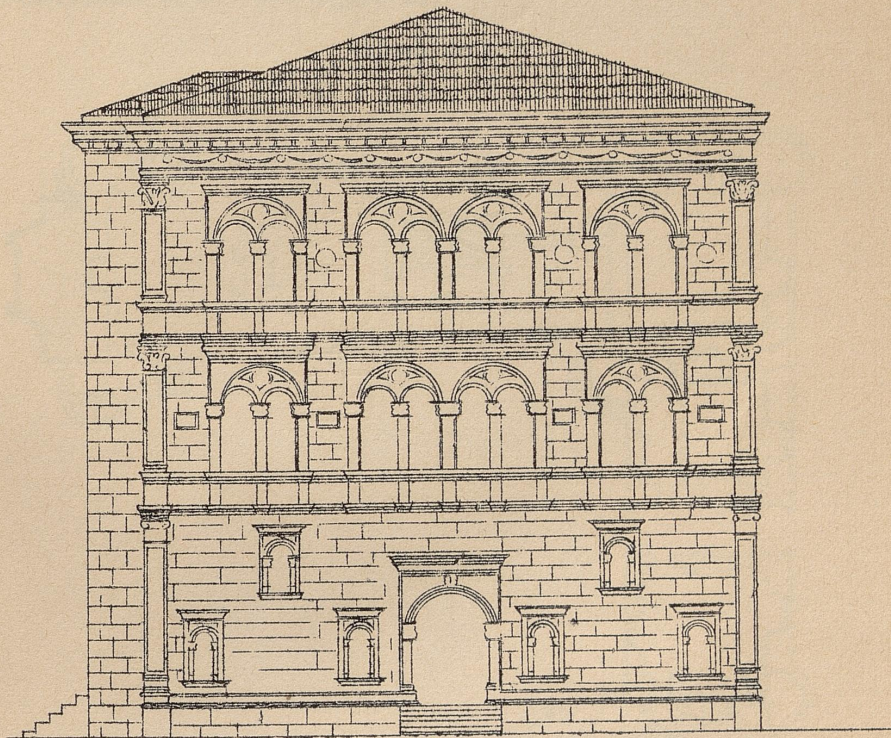
the plan is disposed about three sides of a walled entrance court, with a garden behind the house. The exterior treatment is simple, with stuccoed brick walls, stone-framed openings, and a low-pitched tile roof with overhanging eaves. See Figure 39.

Figure 39.



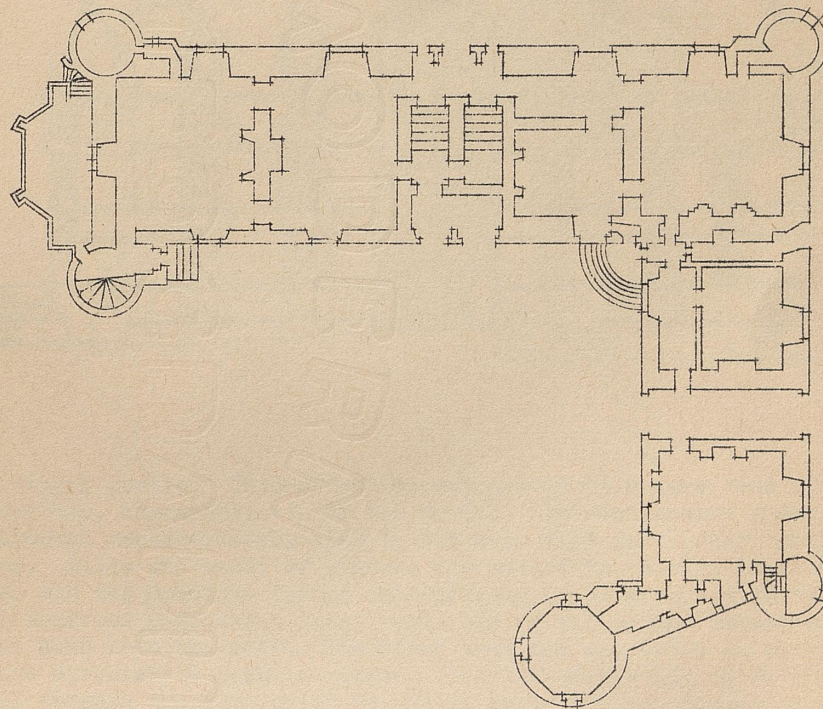
In Venice, the wealth and prestige of its position as a pre-
 eminent factor in commerce was productive of a number of palaces, of
 which the Palazzo Corner-Spinelli is an excellent example, with its
 symmetrical arrangement of balconies and arcaded windows. See Figure 40.

Figure 40



As the capital of the kingdom of France, Paris attained a pre-eminent position as the center of art and literature in the reign of Francis I. This produced a unity in architectural style, which spread through the valley of the Loire, resulting in a group of famous chateaux. In the early, or transitional period, these houses, with their great turrets and steep roofs, retained the character of the earlier fortified castles, upon which was superimposed a wealth of Renaissance detail, which was largely inspired by the presence at the brilliant French court of Italian artists such as da Vinci, Cellini, Vignola, and Primaticcio. Their influence was augmented by groups of Italian craftsmen, who were employed in the erection and embellishment of many new buildings. Among the chateaux of this period, Azay-le-Rideau is an outstanding example of the transitional work. See Figure 41.

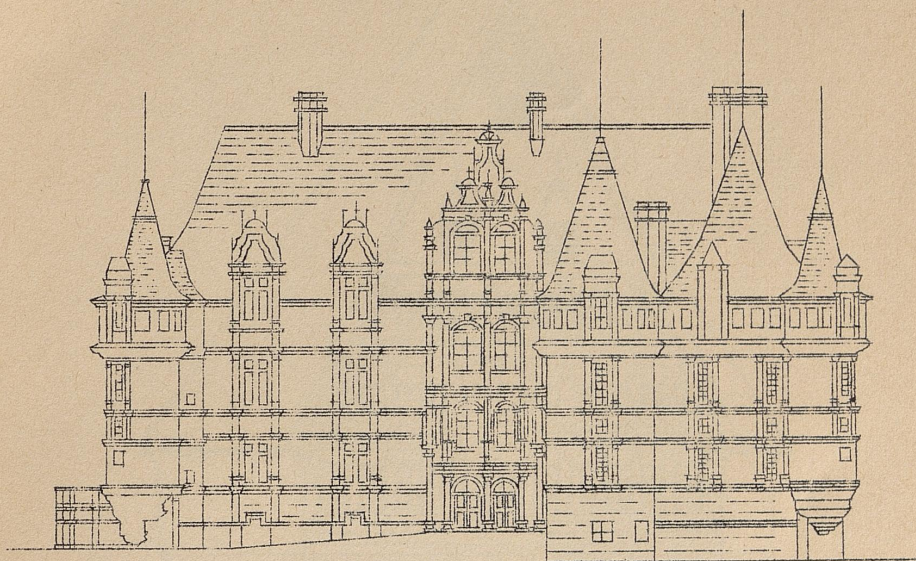
Figure 41.



The plan forms an ell, with the principal entrance in the court formed by the angle. The main floor comprises a series of large rooms --- hall, library, dining rooms, etc., --- enclosed by masonry walls from three to five feet thick. The corners are terminated with five circular, partly engaged towers.

From the exterior, as shown in Figure 42, the general impression created by the conical-roofed towers and high, steeply-pitched roof is that

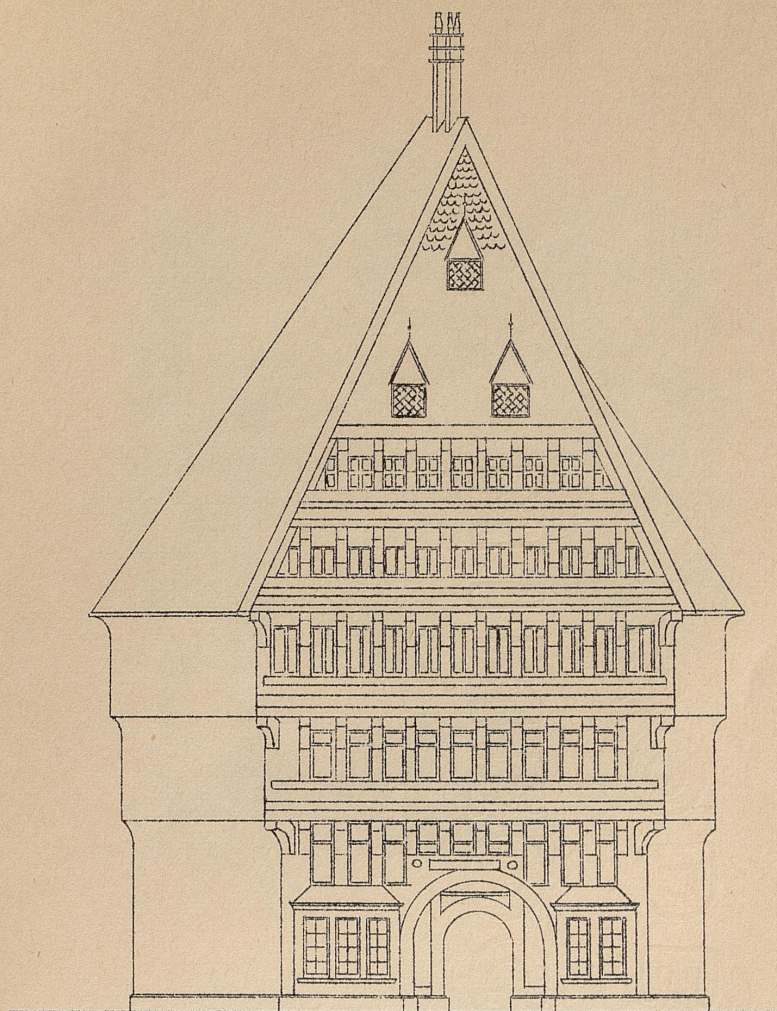
Figure 42



of the feudal castle. This effect is emphasized by a deep band of moulded stone corbels, characteristic of the period, the Renaissance successor of the mediaeval machicolation, also by the moat that partly surrounds the building. Sills and heads of windows are marked by heavily moulded string courses, and the openings framed individually by pilasters with carved caps of modified Corinthian type. Only one of the corner towers extends straight down into the moat. The other four are supported on a series of mouldings circular in plan, springing from the main walls above the grade. The tall dormers are surmounted by curved gable fronts ornamented with curved finials.

In Germany and the low Countries the national characteristic art developed through the Middle Ages offered determined resistance to the encroachments of the Renaissance movement. A striking example is found in the well known house at Hildesheim, in Hanover. See Figure 43.

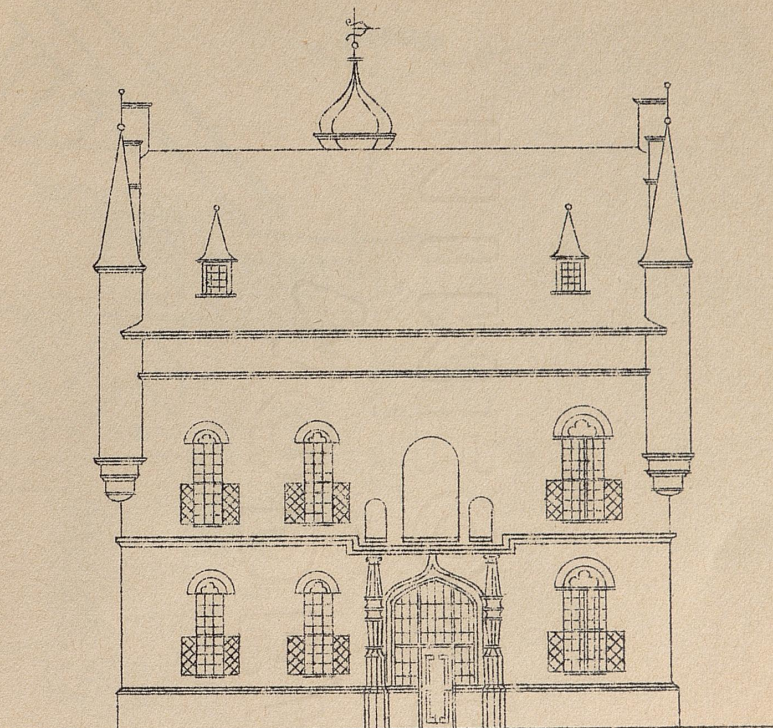
Figure 43



Here the high-gabled, steep-roofed form with bracketed projecting upper stories continues in the mediaeval tradition, concessions being made only in the round arched door and the carving of spandrels and string courses.

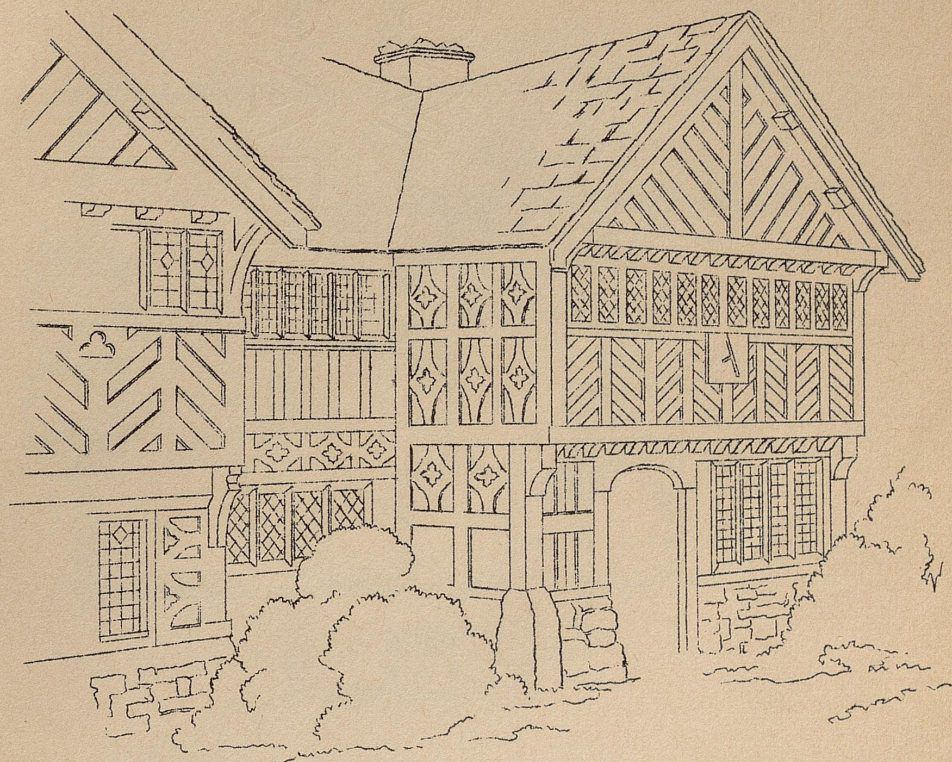
In the house of Martin van Rossum, at Zalt Bommel, in Flanders, the turrets with conical roofs and the use of brick laid in the Flemish cross-bond show how strongly the Fleming adhered to local methods, though he has used the round arch and has borrowed from Classic forms mouldings and interior detail. See Figure 44.

Figure 44



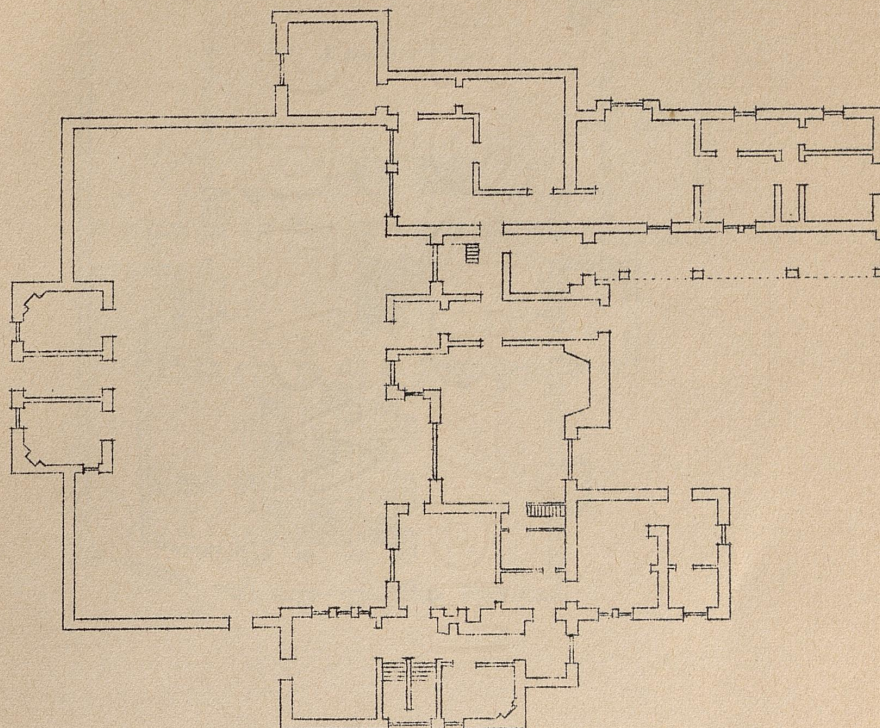
Crossing over to England, where the appreciation of country life was productive of a greater degree of comfort and convenience in the development of large homes than anywhere else in Europe, one finds in the Elizabethan Kenyon Peel Hall the persistence of the ancient half-timber construction which began with the Saxon cruck house. See Figure 45.

Figure 45.



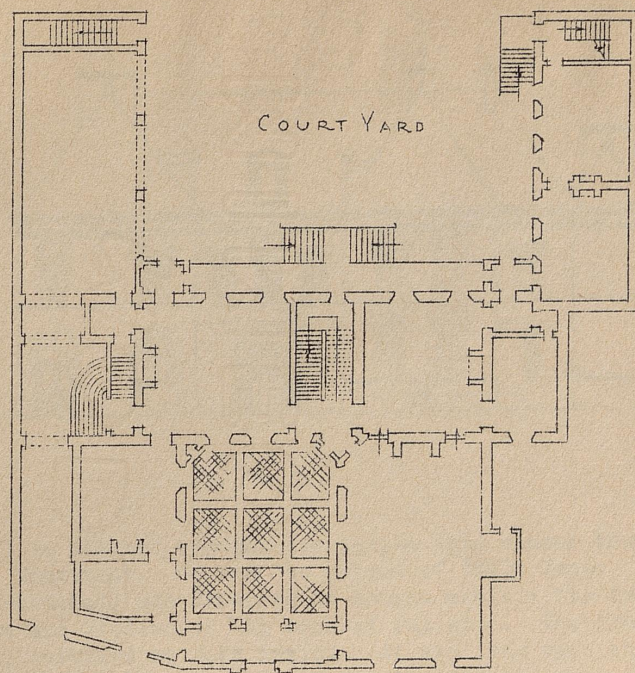
In this house, as in all English mansions before the time of Inigo Jones, the nucleus is the great hall, but spreading from it are gabled wings containing parlors, a library, with drawing rooms, and extensive services in a wide-flung, informal plan. See Figure 46.

Figure 46



The Seventeenth Century saw the construction of great town houses, such as the Hôtel du Vogüé, at Dijon. See Figure 47.

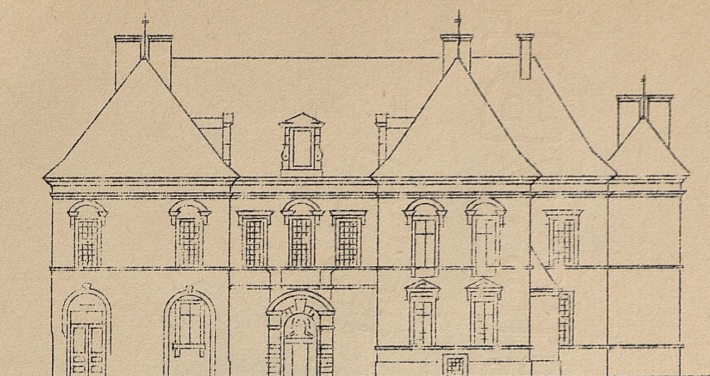
Figure 47.



The great establishments maintained by the noble families of France required for their housing structures of which this building is typical. A forecourt is surrounded on three sides by the principal rooms, and separated from the street by a high wall with a monumental entrance gate. The central portion of the house also overlooks a large paved rear court, which is enclosed on one side by a service wing, and on the other by stables and a carriage house.

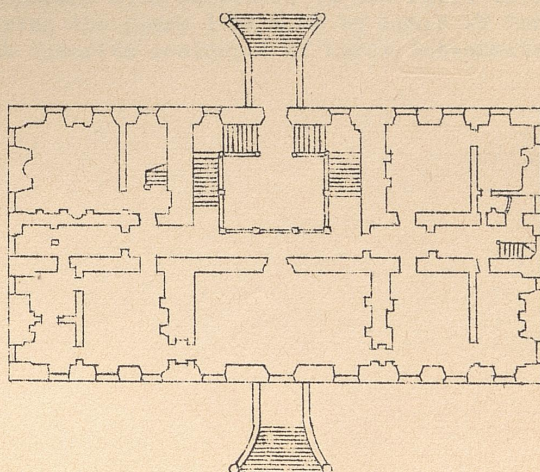
The two-story stone facades are decorated with a discriminating concentration of ornament, with steeply pitched slate roofs and tall chimneys and dormers. See Figure 48.

Figure 48



James I in England brought his people into closer touch with France and Italy on the Continent. He was the patron of Inigo Jones, whose ambitious designs for Whitehall and other great houses exhibit the influence of his Italian tours and studies of the work of Palladio. The house at Coleshill, in Berkshire, illustrates this period. It has long been attributed to Inigo Jones, though recent investigation seems to indicate that John Webb may have been the architect. Coleshill is rectangular in plan, the center being occupied by a monumental stair and the salon, which takes the place of the earlier great Hall. See Figure 49.

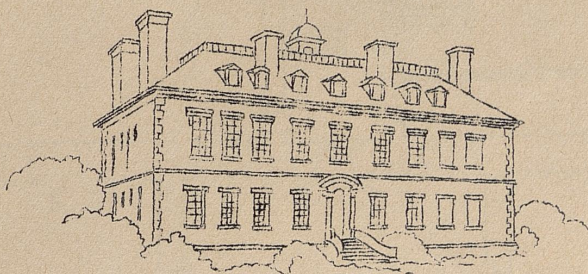
Figure 49



Conte 1

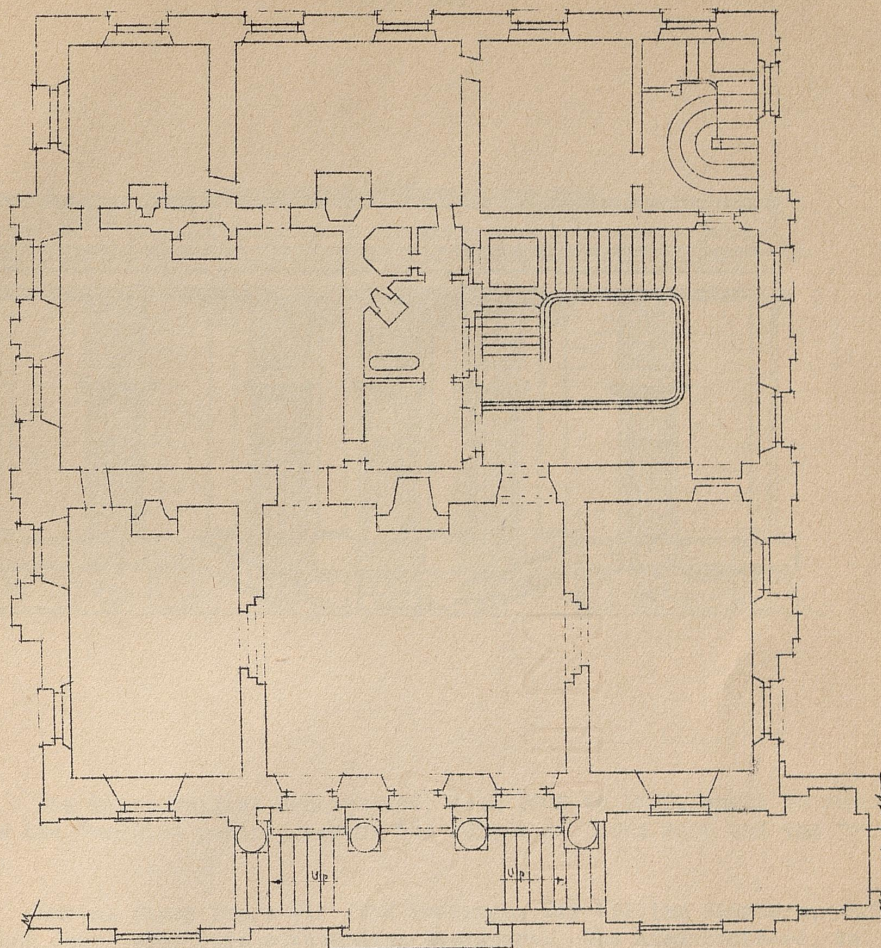
The exterior, of stone with a heavily rusticated base, is symmetrical in both front and rear facades, except for the entrance pediments. See Figure 50.

Figure 50.



Contemporary with Coleshill is the Petit Trianon, at Versailles. It was built during the years 1762 - 68 by Louis XV for Madame Dubarry, and later became the favorite residence of Marie Antionette. See Figure 51.

Figure 51

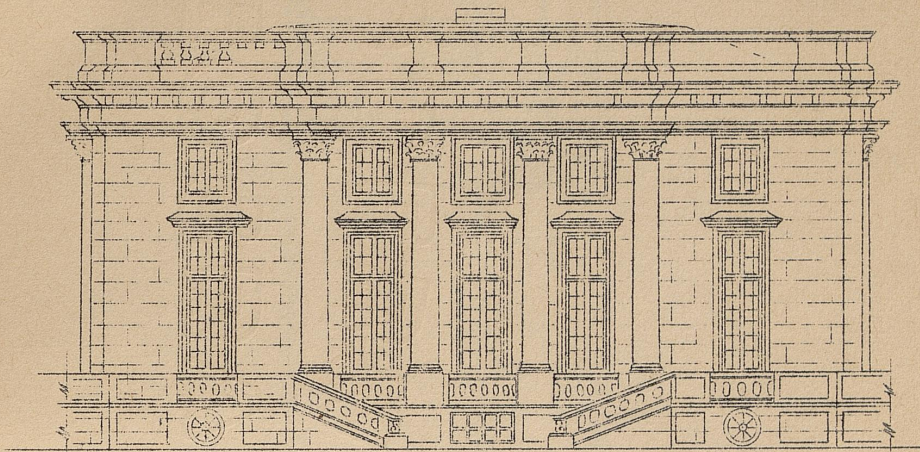


In the disposition of its plan it is similar to Coleshill, although practically square. The salon and principal staircase occupy the center position, with other private apartments grouped at the ends.

Cavalier

The facade is a typical example of late French Renaissance, with rusticated basement and a single Corinthian order including the upper stories. See Figure 52.

Figure 52.

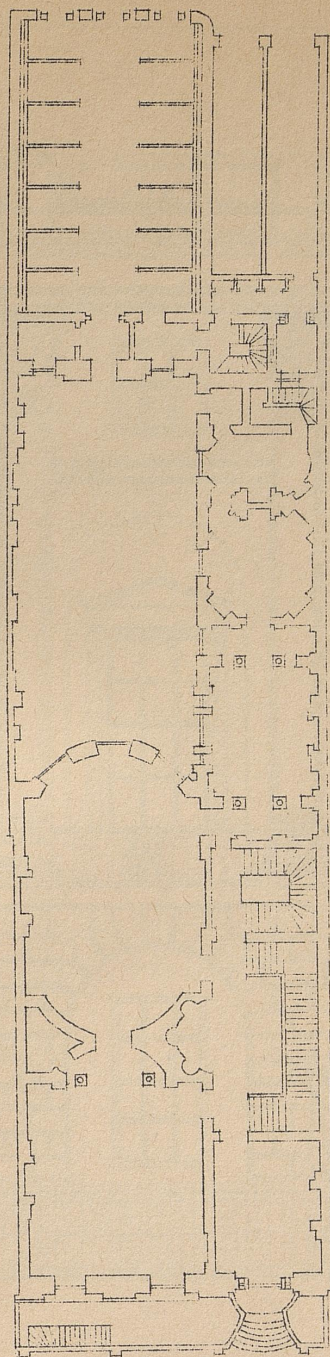


The later English Renaissance, from 1702 to 1830, which is commonly known as the Georgian period, covers the reigns of Queen Anne and the four Georges.

During these years Sir John Vanbrugh, Sir William Chambers, and Robert and James Adam were outstanding designers. The Adam brothers, in addition to their monumental Georgian work, developed a distinctive decorative style, analogous in many features to the Pompeian.

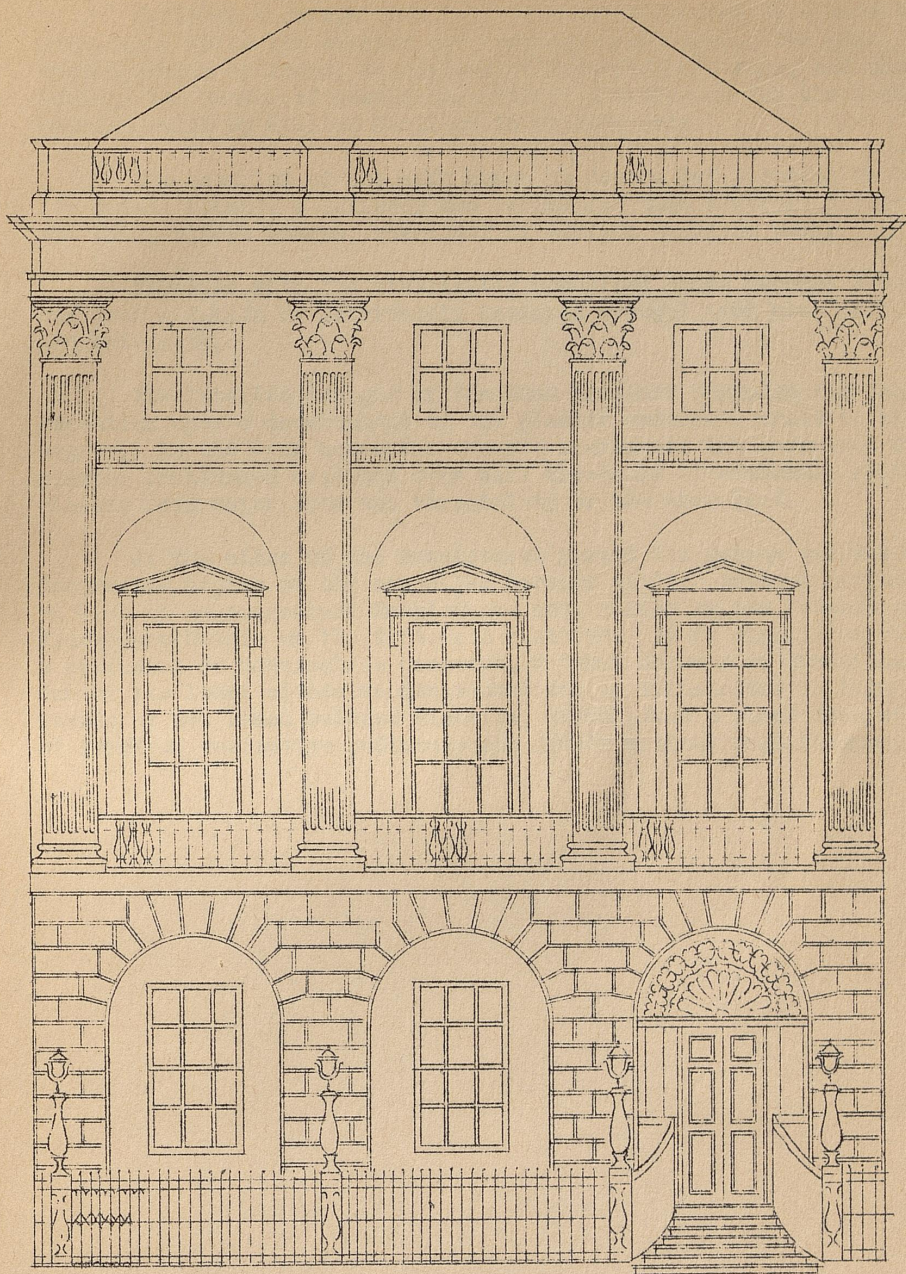
The house designed for Sir W. William Wynn, and built in St. James's Square, London, by Robert Adam, is shown in Figure 53, and 53 - A.

Figure 53.



Copy 1

Figure 53 A



Built on a narrow city lot, it extends through to a mews in the rear, upon which the stables and carriage house open. The plan, with its varied shapes of rooms, is typical of Robert Adam's work, and shows plainly the manner of design that formed a precedent for the Woodlands mansion built by William Hamilton in Philadelphia.

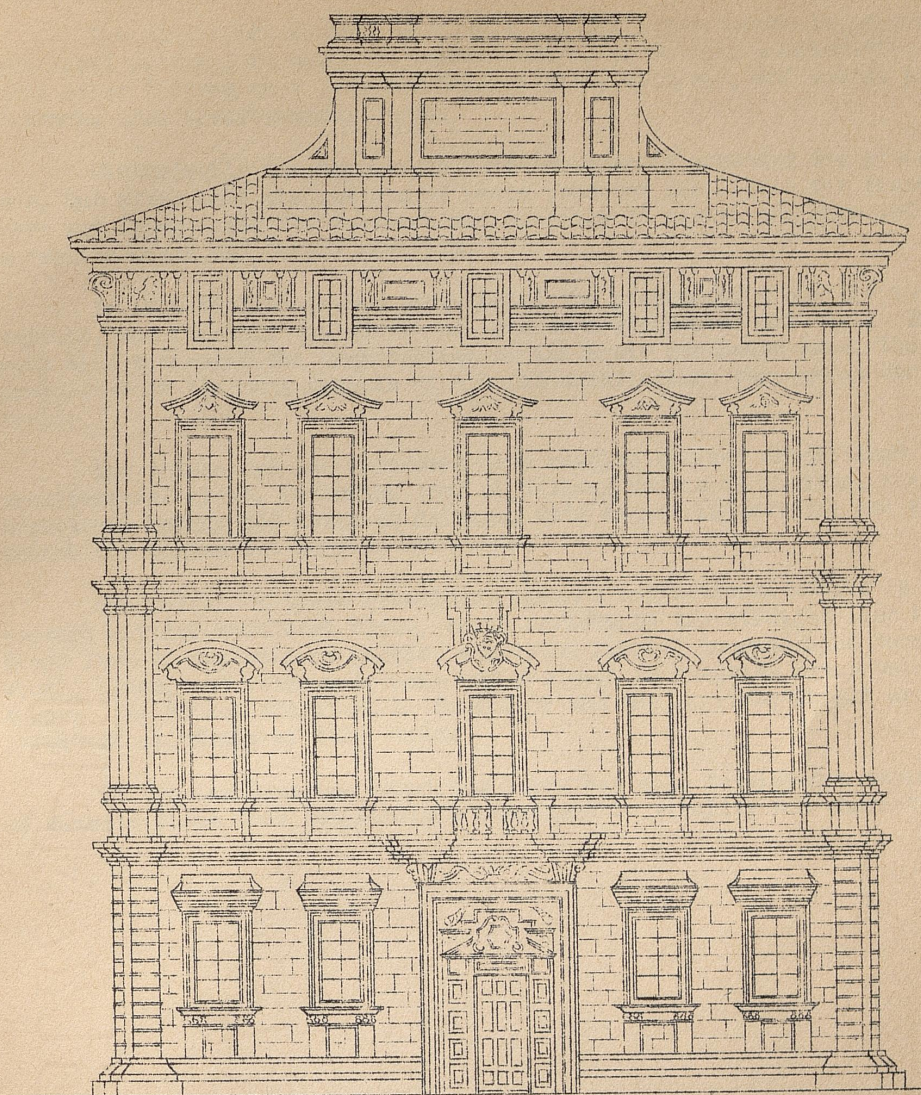
The exterior of the Wynn House is severe yet pleasing in proportion. Its detail betrays a delicacy and refinement that contrast vividly with the bold, almost coarse, character of earlier Georgian work.

Combined with the excellently conceived stone facades Robert Adam has used a wealth of intricately designed wrought iron area rail, lamps, and balconies.

The interior designs of the Adam brothers depended for their execution upon a development of the plaster modeler's craft to the maximum degree. In the Wynn house the owner's apartments are decorated with plaster ornamented ceilings over wall treatment of admirable restrained classic form which show the versatility of the architect.

At the close of the Renaissance period its genius succumbed to the decorative orgies of the so-called Baroque style. Reinach defines it as "a kind of degenerescent Renaissance art, allied by its defects to the Flamboyant Gothic of the fifteenth century". It is signalized chiefly by a profusion of meaningless ornament, without organic or functional reason. One of its least offensive manifestations is illustrated in Figure 54, the facade of the Roman Palazzo Rinucini, which gives a clear idea of the use of formless decorative pediments and detail without significance.

Figure 54.



The Baroque, fostered by the Jesuit Order, spread over Italy and France in the churches erected by that group, in the gardens of Le Notre at Versailles, and in England in the designs of Vanbrugh, Gibbs, and Hawksmoor. Its full expression in England was arrested, however, by the advent of William and Mary, to whose Protestant taste its Roman characteristics were abhorrent.

The Modern Period.

The nineteenth century surpasses all its predecessors in progress in practical science, in means of communication, in religious tolerance, and many other factors that lessened geographical, climatic, and social influences upon architectural style.

Historically the Napoleonic Wars temporarily arrested the growth of art, but after 1815 the new era of peace promoted facilities for travel, gave new opportunity for research and exchange of ideas, and promoted the so-called Greek and Gothic revivals.

In 1860 Viollet-le-Duc promulgated the program of a new architecture, and foretold the advent of iron as a structural material. This year also witnessed the organization of the Ecole des Beaux Arts, the progenitor of the many schools of art and architecture throughout the world,

The modern era has witnessed many revolts against established architectural style, including that of William Morris in England, the architects Hankar and Horta in Belgium, Otto Wagner in Austria, and the French and German Art Nouveau movements.

The latest of these rebellions against conventional models is the present day International Style, which returns to the straight line and block form of the ancient pueblo, employing simple, unornamented forms in steel, glass, and other materials now produced in quantity never before known. The French architect Le Corbusier and the American Wright are prominent exponents of this style.

In the Scandinavian countries there has also developed a variant of classic forms that has achieved considerable vitality and character,

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