THE HOUSE OF THE PROPHET:
NORTH AFRICAN ISLAMIC HOUSING

Although the literature on Islamic housing is growing [1], the field is still relatively new. Islamic archaeology has concentrated on mosques and palaces in much the same way that Christian archaeology has concentrated on churches and catacombs: the social context of these structures has until recently all but been ignored. Our evidence is thus not extensive, and its scarcity has tended to make the subject look simpler than it is. We may learn that the *iwan* house, with one or more living-rooms opening onto a central court, is derived from the Hellenistic house via the Sassanids [2]. Equally, the North African type is said to be based directly on Roman housing [3]. Both are Arab adaptations or simple borrowings from other civilizations: Creswell, for one, felt that indigenous Arab

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[1] Our knowledge of early Islamic domestic architecture derives from a very few sites, although these have inspired quite a lot of commentary. Excavations at Fustat (old Cairo), largely destroyed in 1168 A.D., have been published by A.B. BAGHAT and A. GABRIEL, *Fouilles d'al-Foustat*, Cairo 1921, and by G. SCANLON in the form of preliminary reports in the « Journal of the American Research Center in Egypt » IV, 1965, 7-30; V, 1966, 33-112; VI, 1967, 65-84; XI, 1974, 81-91, XIII, 1976, 69-89: useful summaries are found in G. SCANLON, *Housing and Sanitation*, in A. Hourani and H. Stern (eds.), *The Islamic City*; and A.A. OSTRASZ. *The Archaeological Material for the Study of the Domestic Architecture at Fustat*, « Africana Bulletin » 26, 1977 (with a typology of the buildings, based largely on the number and position of the *iwan*). The documents from the Cairo Geniza are extremely useful on the subject: S.D. GOITEIN, *A mansion in Fustat: a twelfth century description of a domestic compound in the ancient capital of Egypt*, in H. Miskimin (ed.), *The Medieval City*, New Haven 1977, 163-177; *Urban housing in Fatimid and Ayyubid times (as illustrated by the Cairo Genizah documents)*, « Studia Islamica » 47, 1978, 5-23. Urban houses (as opposed to palaces) are also known from Siraf: D. WHITEHOUSE, preliminary reports in « Iran » VI, 1968, 1-22; VII, 1969, 36-62; VIII, 1970, 1-18; IX, 1971, 1-17; X, 1972, 63-87; XII, 1974, 1-30; from Samarra: T. AL-JANABI, *Islamic Archaeology in Iraq: recent excavations at Samarra*, « World Archaeology » XIV, 1983, 305-326; from Almeria: L. TORRES BALBAS, *Restos de una casa arabe en Almeria*, « Al Andalus » 10, 1945, 170-196; and from Qsar es-Seghir in Morocco: C. REDMAN, *Qsar es-Seghir: an archaeological view of medieval life*, New York 1986. General discussions of Arab urban housing abound, normally based on early modern evidence. For those which deal with earlier material: see for instance the discussion in U. MONNERET DE VILLARD, *Introduzione allo studio dell'Archeologia Islamica*, Venice 1966, chapters 1 and 2; A. LEZINE, *Deux Villes d'Ifriqiya*, Paris 1971; A. AHSAN, *Social life under the Abbasids*, London 1979, 165-195; A. NEGEV, *House and city-planning in the Ancient Negev*, in A. Golany (ed.), *Housing in Arid Lands*, London 1980. On specific features of Islamic houses: H. FATHI, *The Qa'a*, in *Nadwa, Colloque International de l'Histoire du Caire*, Cairo 1969; L. GOLVIN, *Note sur les entrés en avant-corps et en chicane dans l'architecture musulmane de l'Afrique du Nord*, « Annales de l'Institut d'Études Orientales » XVI, 1958, 221-245. On the transition from late antique to Islamic cities see most recently H. KENNEDY, *From Polis to Medina: Urban Changes in Late Antique and Early Islamic Syria*, « Past and Present » 106, 1985, 3-27.

[2] The point was first made by R. SAUVAGET, *Remarques sur l'art Sassanide*, « Revue des Etudes Islamiques » 12, 1938, 113-131, and followed up by W. MARÇAIS, *Salle, Antisalle*, « Annales de l'Institut d'Études Orientales » X, 1952, 274-302. A good discussion can be found in MONNERET DE VILLARD (*op. cit.* note 1), 77f.

[3] « Toutes les architectures bérbères, partout où elles ont pu subsister, se construisent encore sur des plans romains. »: H. TERASSE, *Histoire du Maroc* I, Casablanca 1949, 70.

architecture simply did not exist [4]. The evidence presented in this study tends in the opposite direction. Three themes will be treated here: first, the nature of the tenth-eleventh century houses found on the Algerian excavations in Sétif; second, the evidence for the distribution of this type and for its origins; and third, the relationship between the house type found here and the structure of contemporary Islamic society. All three investigations are quite inconclusive, and are intended more to stimulate argument than to provide answers.

1. HOUSES AT SÉTIF

Sétif, Roman *Sitifis*, lies some 75 km. from the coast, in the southern foothills of the Kabylie range (fig. 1). Unlike most other Roman African sites, the Islamic centre of the town was spared the destructive attention of colonial archaeologists. This was due in part to the Byzantine fortress and the Arab city wall, which served as a convenient basis for the defence of a French army camp [5].

The excavated part of the Arab town lies on its periphery, and, although occupation of the town itself was probably continuous, there is every reason to think that it shrank into the Byzantine fortress at the end of the Roman period, and only expanded again around the beginning of the tenth century [6]. We are consequently unable to follow the development of housing from the eighth century. A more serious problem arises from our lack of knowledge of the rest of the town, for it may be that houses of the type found in the northern sector are different from those found elsewhere. Islamic towns are characterized by their division into sectors – tribal, religious, commercial – and the differences between these sectors might be reflected in the house-types [7]. We have no way of controlling this variation without further excavation, and will simply have to rely on what we have got [8].

Figure 3 shows a schematic plan of the housing during the last phase of the site's occupation. The earliest houses on the site are those on its southern edge,

[4] K.A.C. CRESWELL, *Early Muslim Architecture* I, Oxford 1932, 7.

[5] The Algerian excavations of the site took place between 1977 and 1985, and received an initial publication in 1985: A. MOHAMEDI, E. FENTRESS, *Fouilles de Sétif*, « BA » 19, 1985, 33-40; full publication is in press (A. AMAMRA, A. BENMANSOUR, E. FENTRESS, and A. MOHAMEDI, *Fouilles de Sétif 1977-1985*). The information presented here is a summary of that found in the earlier article, although much of its elaboration is new.

[6] AMAMRA *et al.*, *op. cit.* note 5.

[7] The division of the Islamic city into distinct tribal and economic sectors is discussed by W.B. KUBIAK, *The Circulation Tracks of Al-Fustat: one aspect of the Physiognomy of a Medieval Arab City*, « Africana Bulletin », 1979, 7-28 (Fustat) and by H. KENNEDY, *The Prophet and the Age of the Caliphate*, London 1986, 136 (Baghdad).

[8] A sampling strategy for the whole city, similar to that of Redman's excavations at Qsar es-Seghir (*op. cit.* note 1), was drawn up for the second phase of the excavation, but the construction of an amusement park on the site effectively halted this project.
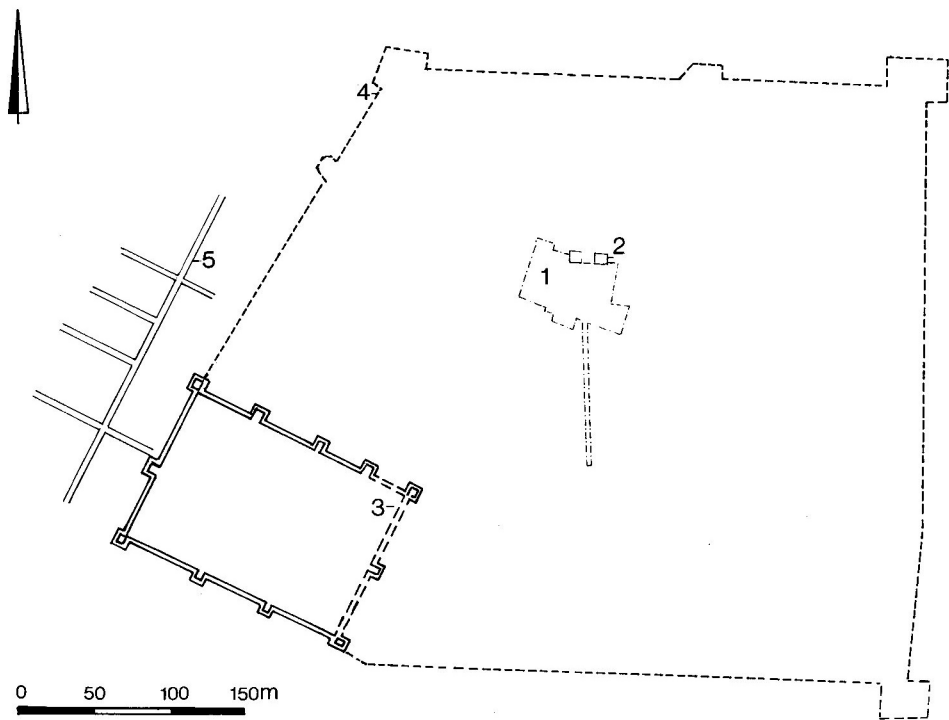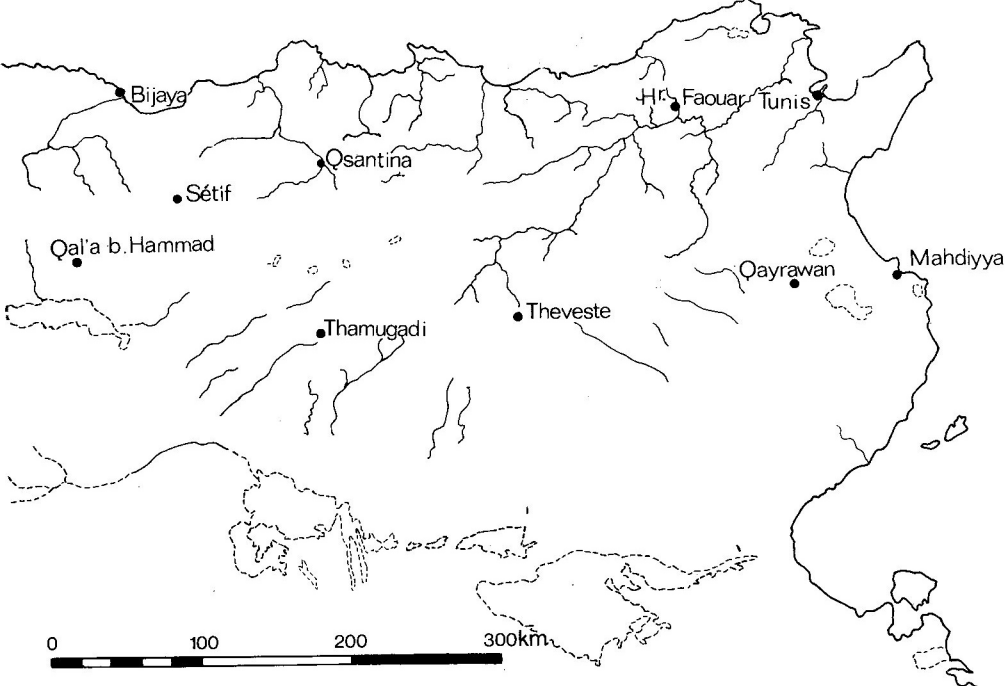
Fig. 1 – Location of the site: 1. the location; 2. Gate of the 1848 French fortification; 3. Byzantine fortress; 4. French fortification ca. 1870; 5. Roman roads.

V and IX. A radiocarbon date of 655-970 (BM 2638, calibrated) for the end of the first phase of Building IX, a coin of the sultan Moïze (973-975 A.D.) from the third floor of Building V, and some few sherds of imported pottery seem to confirm that the houses were built no earlier than the second half of the tenth century. Building I, followed by Buildings VI and II, and then by Buildings X, VIII, XI, and VII, continued the expansion of the town towards the north. This expansion was, however, abruptly halted by the construction of a city wall which cut through the northern row of buildings. This event may be dated to around the middle of the eleventh century. Only Building X was rebuilt, and seems to have been reoccupied for a very brief period. The other houses on the site were abandoned, although there is no trace of violent destruction. The houses are thus reasonably closely dated to the second half of the tenth century and the first half of the eleventh; the modifications which we shall see in the second phase of Building X are the latest for which we have any evidence.

Construction Techniques

The basic construction technique was consistent throughout the site. Both outer and inner walls were of *pisé* on a stone socle. In general, only the socle was preserved, standing to a height of between 50 cm. and 1 metre. In all cases earth was the only mortar. The whole wall was plastered with an impermeable coat of orange or yellow clay mixed with an equal quantity of lime. Although some tile was used in all the walls, only one example of brick construction was observed on the site, a small pilaster forming a door jamb.

Although these basic construction techniques remain the same, a large degree of variation exists between individual buildings. This variation is in fact so great that it has not seemed worthwhile to make a typology of the walls, as such a typology would coincide exactly with the number of buildings – and rebuildings – on the site. It is fairly clear that each house was built by a separate team of workmen (perhaps the members of the family), and that building techniques were in no way standardized. Figure 2 gives an idea of the variation. The sample drawings are arranged in chronological order, and certain general conclusions may be drawn. The use of large cut-stone blocks from the Roman town certainly diminished over time, but this is likely to be a function of their availability. The earliest buildings, V and IX, were constructed almost exclusively of reused blocks. Neither building was particularly well built; the foundations were shallow (20-30 cm) and the blocks poorly fitted together. In the case of Building V this problem was resolved by lining the interior walls with orange clay. This served to seal the room against draughts and damp, and probably added a degree of insulation.

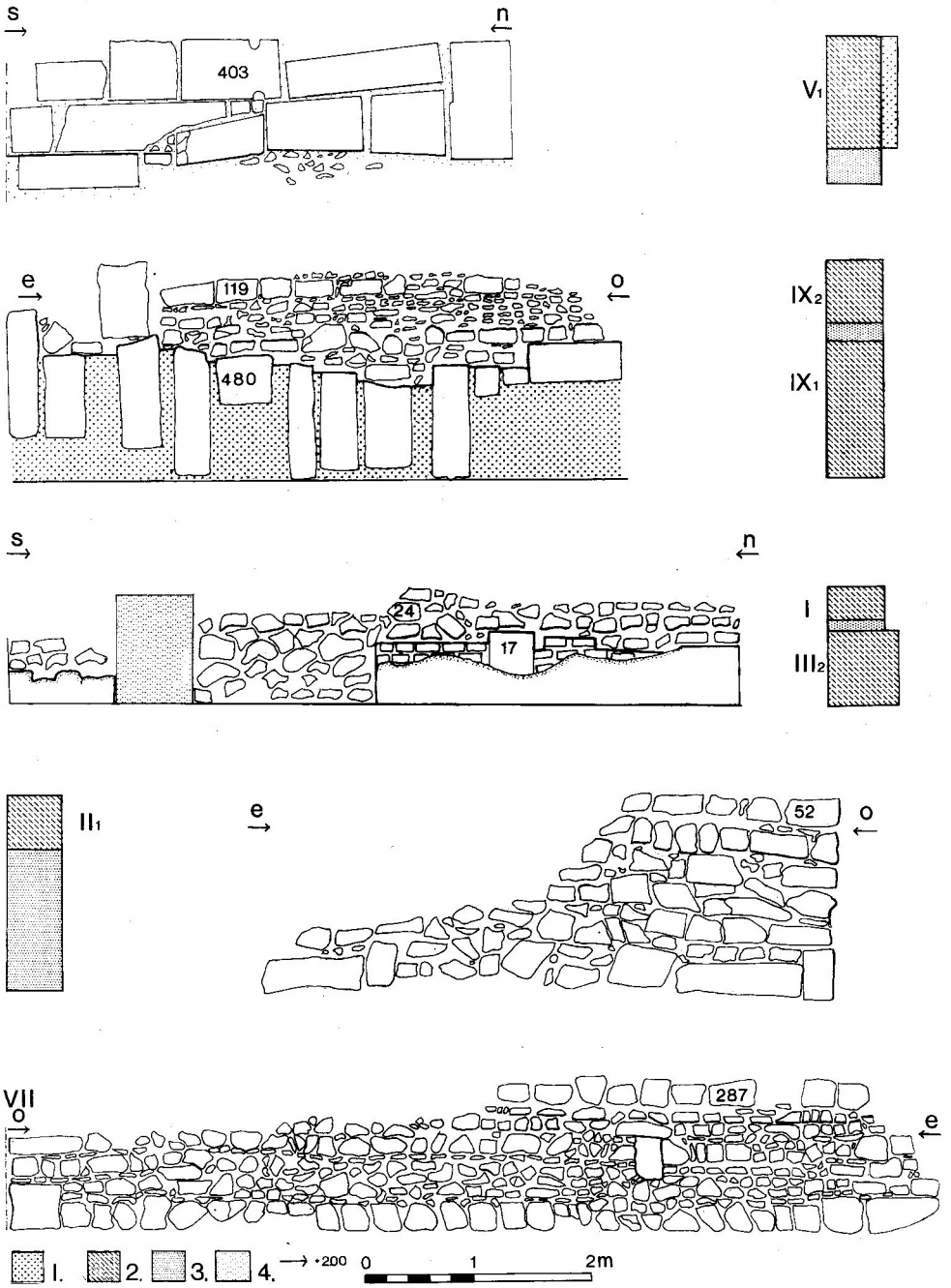While in Building V the visible stones tended to be roughly square, those

Fig. 2 – Construction techniques: 1. Pisé; 2. socle; 3. foundation; 4. French wall.

of Building IX were rectangular orthostats, and the construction technique was closer to the Roman *opus africanum*. The orthostats were placed at irregular intervals, and the spaces between them filled with stones or, where the gaps were extremely narrow, with *pisé*.

By the time that Building I was constructed it is clear that large Roman blocks were less plentiful. One of the consequences of this was a need for deeper foundations. Where possible, the walls of the underlying Roman baths were used as foundations for the new building. Otherwise, foundation trenches up to a metre deep were dug, in the hope of finding a solid base such as a Roman pavement. The foundations themselves were roughly built, with an occasional Roman block at the lowest course. Above ground the walls were built of faced and closely fitted stones, irregularly coursed.

Only the outer walls of Buildings II and VI were constructed on deep foundations, The walls of these and the successive buildings on the site have fairly haphazard coursing, with occasional orthostats at the corners and in the outer walls. New houses were built adjacent to earlier structures and used their outer walls. This often required the reconstruction of the earlier structure's roof and of the top section of wall.

For the roofs of the buildings we have very little evidence. They seem to have been tiled with small flat *tegulae*, nailed, where appropriate, to the roof timbers. Very few of these have survived, however, and it is likely that they were systematically removed from the abandoned buildings for use elsewhere. In general, it seems fair to assume from the proportions of the rooms that all roofs had a single pitch, sloping inward towards the courtyard. We have evidence for a storey in only one case, and flat roofs would be entirely inappropriate to the harsh climate and deep winter snows of Sétif. Occasional small square buttresses give evidence that the join between one wing and another was somewhat problematical; they normally occur at the inside corners of the courtyard, where they may have given additional support to the major beams, which carried the roofs of two adjoining wings. In the first phase of Building V there is evidence that posts were used to support the light roof of a shelter in the courtyard, but this is the only direct evidence for vertical timbers on the site.

The floors were covered with beaten earth or, in more elaborate rooms, with the same clay and lime plaster that was used on the walls. Courtyard surfaces were usually beaten earth, but neatly paved sections, providing clean entrances to the reception rooms and kitchens, are visible in both Buildings I and VI.

The construction techniques attested to here are thus simple in the extreme, although adequate in terms of the structures themselves. The combination of stone socles and elevations in *pisé* is a very practical one, for which there are
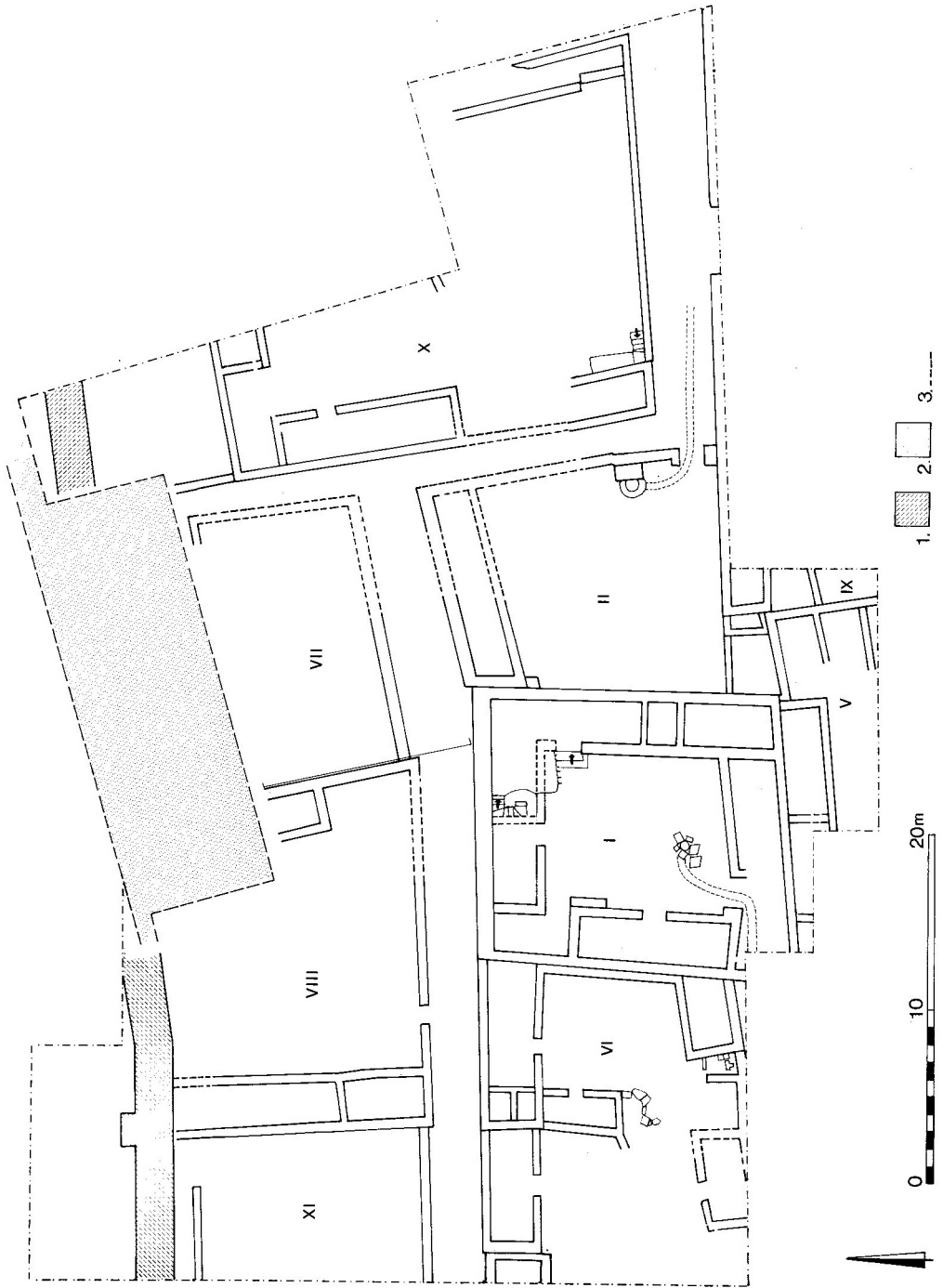
Fig. 3 – Schematic plan of the Islamic buildings of the last phase, ca. 1050: 1. rampart; 2. 1848 gate; 3. suggested course of wall.

many ethnographic parallels in modern Algeria. The socle protected the *pisé* from contact with the damp earth, while the construction of most of the wall in *pisé* provided a far greater degree of insulation against the extreme climatic variations of Sétif than walls built entirely of stone. This care to provide adequate insulation is especially visible in the thickened walls of the first phase of Building V. The thick clay and lime plaster which was used on all walls had a variety of functions. First, it protected the *pisé* against rain. Second, it provided a far more finished surface. Finally, it provided a constant insulation of the building, shielding the interiors from both heat and cold.

Little continuity is apparent between these techniques and those of the Roman period, although the materials remain roughly the same. Walls in *pisé* are common to both, and late Roman buildings often dispensed with lime mortar [9]. The use of orthostats in some walls during the Islamic period was probably due as much to their availability as to a continuity in the tradition of *opus africanum*. The use of a clay plaster on the walls and floors was a complete innovation. Further, the roof tiles were very distinct from their Roman ancestors, both in size and because they were nailed on; here the absence of mortar to fix the tiles must have been all-important. More striking is the total absence of a ridgepole, and of a double-pitched, gabled roof. No room was wider than 2,5 metres, and it might be suggested that the available carpentry techniques would not have permitted a greater width; the maximum width of a room was determined by the maximum length of the available timber. This is perhaps the most important distinction between the two architectures; indeed, the narrow module is a constant throughout *all* medieval Islamic architecture in the Maghreb, whether vaulted or covered with a timber-based roof.

We may conclude from this that construction techniques indicate a fairly clean break between late Roman and Islamic architecture. The difference in plan is even more striking.

Plans

Although somewhat atypical, Building I is the obvious point of departure, as this is the most completely excavated building. Figure 4 is a composite drawing of the last phase, and Figure 5 suggests how it might have looked; it is based on the plan and on modern parallels [10]. The house was entered from the south-west, the courtyard obscured from the street doorway by a right-angled

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[9] See for example the late fifth century 'Building 2' at Carthage; H. Hurst and S. Roskams (eds.), *Excavations at Carthage: the British Mission*, Sheffield 1984, 275f.

[10] Very similar houses still exist in the countryside near Sétif. The height of the courtyard wall (3,5 m = 7 cubits) also corresponds to that cited for the house of Muhammad (below note 26).
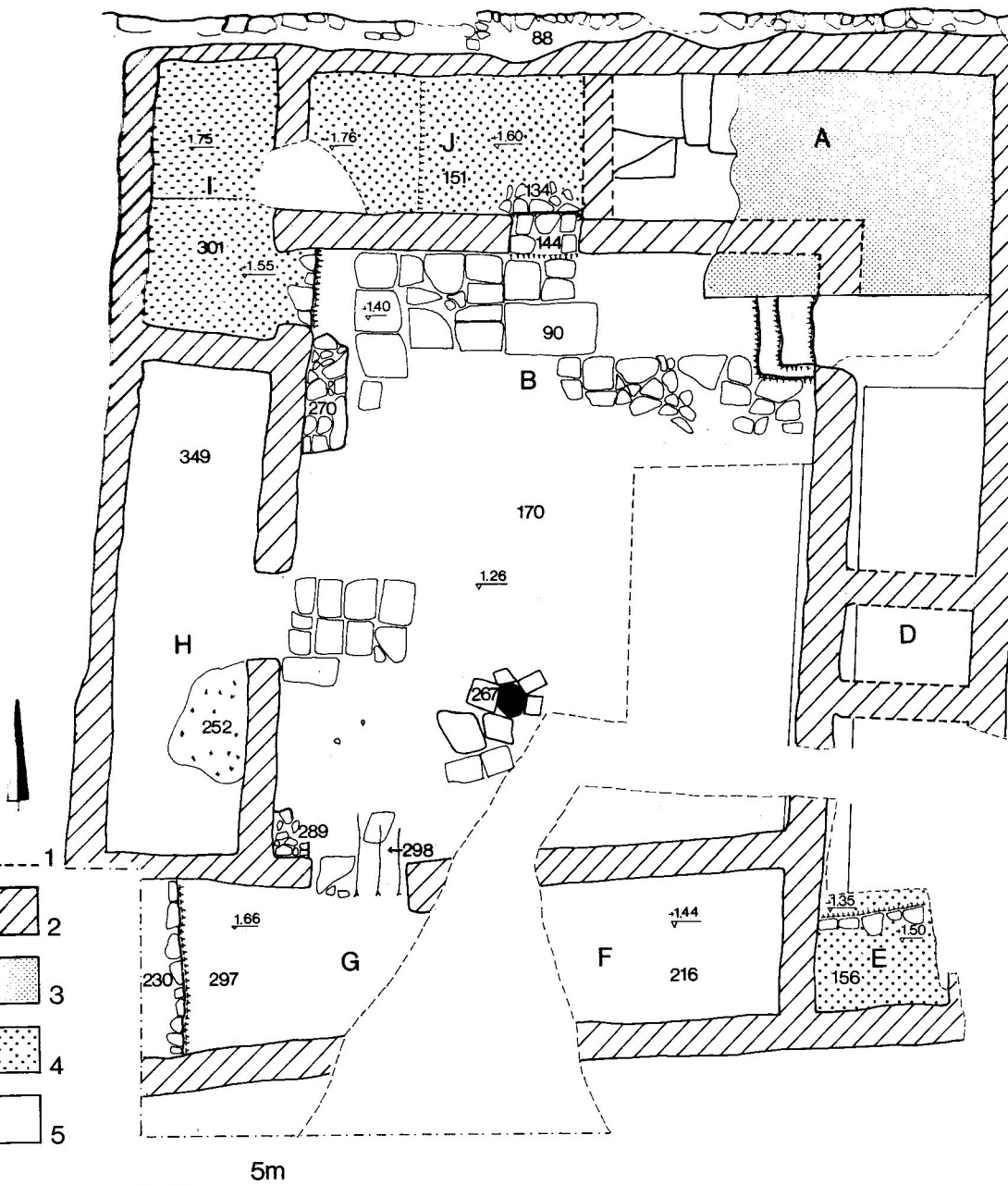
Fig. 4 – Building I, phase 2: 1. cut; 2. wall retained from previous phase; 3. Roman vault used as flooring; 4. clay-lime plaster; 5. beaten earth.

bend. The central courtyard, or *ga'a*, was by far the most important space, although in this house it occupied – exceptionally – only 33% of the whole building site. The enclosure formed by the four wings of the building protected this space during the harsh winters, while the roofs, and perhaps a tree, provided shade in the summer. Most of the light and air inside the rooms came from the doorways, and this probably influenced the choice of the north-facing wing as a stable or barn.
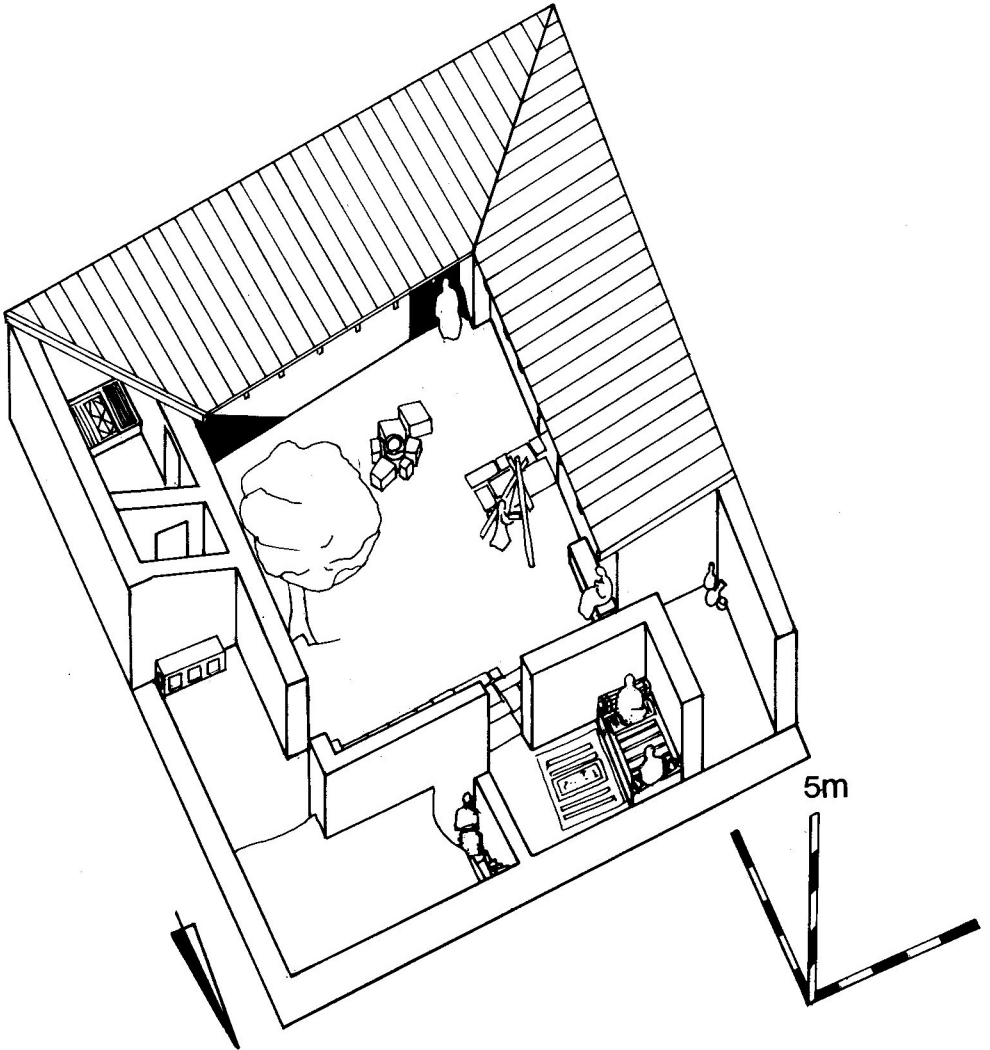

Fig. 5 – Building I, suggested reconstruction.

In three of the rooms we find raised platforms, 10-20 cm. high, edged with brick. These rooms were floored with the same yellow clay plaster seen on the walls, and the care taken in their appearance is evident from the numerous replacements of floor and wall plaster. These rooms must be interpreted as *majlis*, or multi-purpose rooms, intended both for the reception of guests and for sleeping. One of them might have been reserved for men and another for women, but that is not certain. The rooms were heated by small braziers, traces of which were found by the doorways. The long south-west room was used for cooking in the winter, and its hearth probably made it the warmest part of the house.

The functions of the other rooms are less clear, but it is likely that they were used for both working and sleeping. Under the north-east corner lay the store-room, created from a small Roman vault (fig. 6). Here a silo contained the year's grain supply, a volume sufficient for around ten people. This seems a reasonable estimate of the number of people who might have lived in the house. If it were correct, there would have been 30 m² of total space, or about 20 m² of covered space for each occupant.

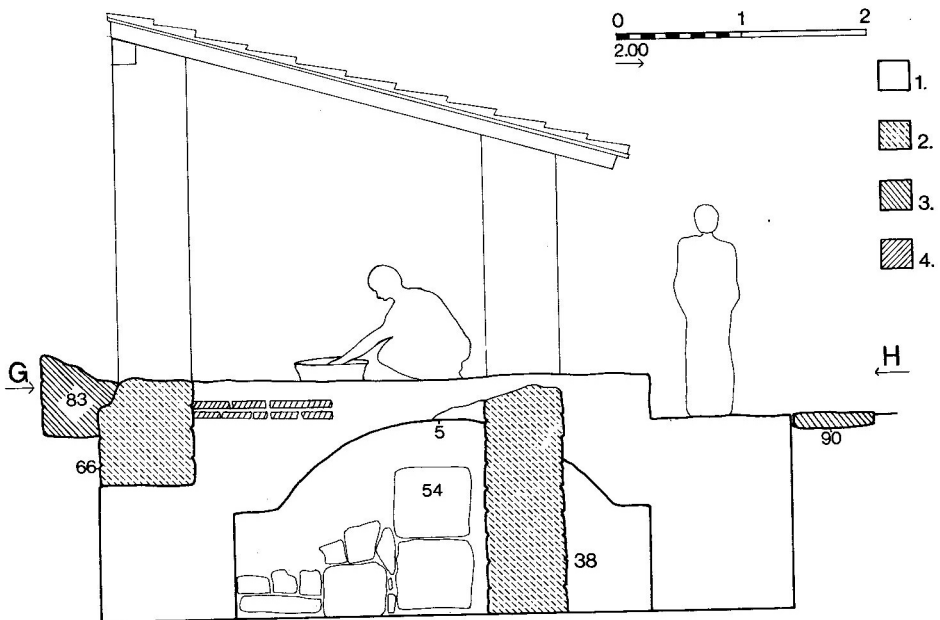The other houses suggest a similar pattern, although with many variations.

Fig. 6 – Building I, section across Roman vault, suggested reconstruction of roof pitch. 1. Roman walls; 2. Building I, phase 1; 3. Building I, phase 2; 4. steps in brick.

Only Building I had four wings. The others were originally built with one or two, and a further wing was sometimes added, as in the case of the east wing of V, and possibly the west wing of II. A plastered reception room with a raised platform was present in Buildings VIII, VI, V, and X; in II, VII, IX, and XI not enough of the plan survives to be certain, but yellow plaster was present in both Buildings IX and II. This trait is thus constant, and a valuable indication of the status of the various rooms. The east-and south-facing rooms seem to have been the preferred living quarters, because of their exposure, but east wings may have been used during the summer. The south wing remained the least important; in Buildings VI and II (the only other cases beside Building I in which it was present) it was reserved for more mundane uses, apparently as a vestibule, stables, and a latrine.

Building X (fig. 7) shows a variation in this plan. The last house built on the site, it was also the only one for which we have evidence of an upper storey. The gallery, suggested by the stairs and by the area of yellow clay found close to the walls, was used to communicate between the rooms of the upper storey, as well as to shade the edge of the courtyard. This upper storey would have given the covered part of the building area of some 260 m^2. Using 20 m^2 of covered space per person as a rule of thumb, this would have provided space for 12 to 14 people. The courtyard covered fully 363 m^2.

It is not clear to what extent the courtyards were used to shelter animals. Only in Building I does there seem to be evidence that animals were kept away from the courtyard: layers with high phosphate content were limited to Room F, on the south side, and the courtyard itself was cleanly paved with beaten earth and smooth stones. However, sheep coprolites found in the fill of the domestic silos in Buildings V, VIII, and X suggest that sheep were, at least temporarily, kept inside [11]. A similar sample from VI contained no coprolites, but the presence of silty green layers in the courtyard suggests phosphates. In Building X, the long thin right-angled entrance seems to have been used for controlling the passage of flocks. Further, grasses and vetch were present in samples from silos in V, VIII, and X, and might be interpreted as fodder. There is, therefore, some evidence of stabling throughout the period, but the exceptionally large courtyard of Building X may indicate that the stabling of animals in urban buildings was becoming more common, possibly as a result of the increasing insecurity of the countryside.

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[11] The botanical material from the site has been studied by Martin Jones and Carol Palmer (AMAMRA *et al.*, *op. cit.* note 5).
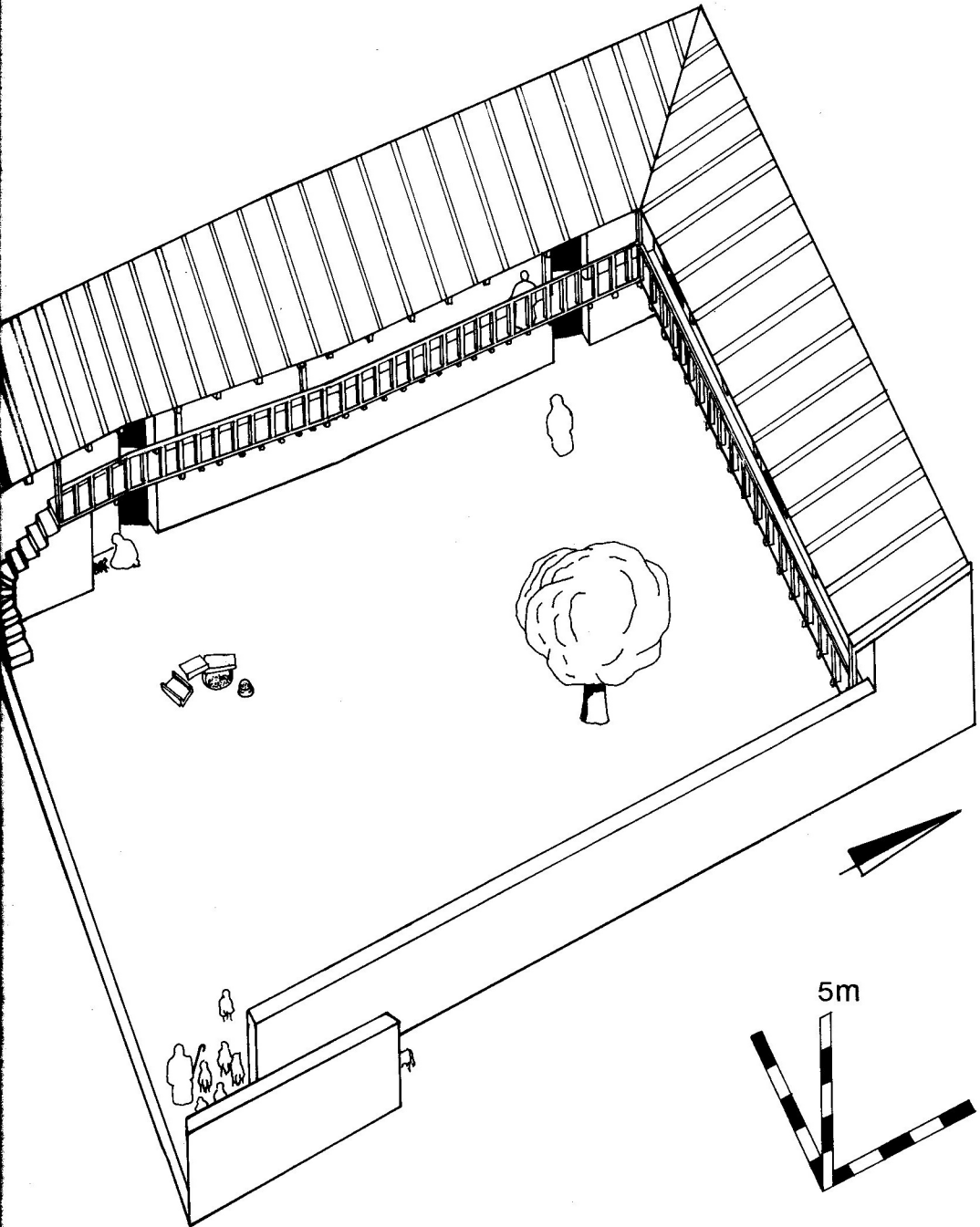
Fig. 7 – Building X, suggested reconstruction.

2. DISTRIBUTION AND ORIGINS

The plans of the houses found in Sétif are hardly unique, and before discussing their distribution it seems worthwhile to sum up the characteristics of the type. First, the building site is square, or nearly so, surrounded on all sides by a wall. Second, suites of rooms are built against this wall on one or more sides; these are subordinate to the walled space, and enclosed within it. Third, the entrance is usually at a right angle, although there are some exceptions to this rule. Fourth, the lack of carpentry techniques adequate for the building of a gabled roof places severe restrictions on the architectural possibilities; in practice, it limits the width of rooms to no more than 2,5 metres. Fifth, the more elaborate rooms are characterized by small raised platforms at one or both ends, occasionally recessed. These are never replaced by reception rooms entirely open onto the courtyard (*iwan*).

There are few securely dated examples in the archaeological record. The closest parallels are found at Henchir Faouar in Tunisia, where they are built over the last buildings of the Roman period [12], and may be almost immediately post-Roman. Although one large building at Henchir Faouar is more complex, and seems to have been built around the Roman basilica, two smaller houses to the east of it are very similar, in both size and shape, to those at Sétif (fig. 8). The same characteristic, long, narrow rooms surround a large courtyard. The right-angled entrance is, however, missing in the smaller houses, and appears only in the large *qsar*. The 'Troisième Habitat' built into the amphitheatre at *Theveste* [13] also shows traces of this plan, especially on its north side. At Tihert, founded, according to our sources, in 761 and destroyed in 909 A.D., the published aerial photograph shows a regular series of houses all of which seem to have the same structure, with narrow wings built against the courtyard wall [14]. This standard module can be found in Spain as well: at Cordova, the palace at Madināt al Zahrā seems to have comprised a number of houses of this type (fig. 8; 4) [15].

This plan is not limited to the poorer housing. Indeed, the great palaces at Achir and at the Qal'a of the Beni Hammad seem to be composed of multiples of this basic module on a much grander scale. At Achir, built in 947, the large central court surrounded by four subsidiary courts almost exactly reproduces this model [16]. At the Qal'a, the eleventh century Palais de la Salut shows elements

[12] A. MAHJOUBI, *Recherches d'histoire et d'archéologie à Henchir El-Faouar, Tunisie: la cité de Belalitani Maiores*, Tunis 1978.

[13] R. LEQUÉMENT, *Fouilles à l'amphithéâtre de Tébessa (1965-1968)*, Algiers 1968, pl. 35.

[14] P. CADENAT, *Recherches à Tihert-Tagdempt, 1958-1959*, « BAA » 7, 1977-1979 [1986], 393-421, fig. 1.

[15] J. HOAG, *Architettura Islamica*, Rome 1975, 80.

[16] S.D. GOLVIN, *Le Magreb central à l'époque de Zirides*, Paris 1957, 181.
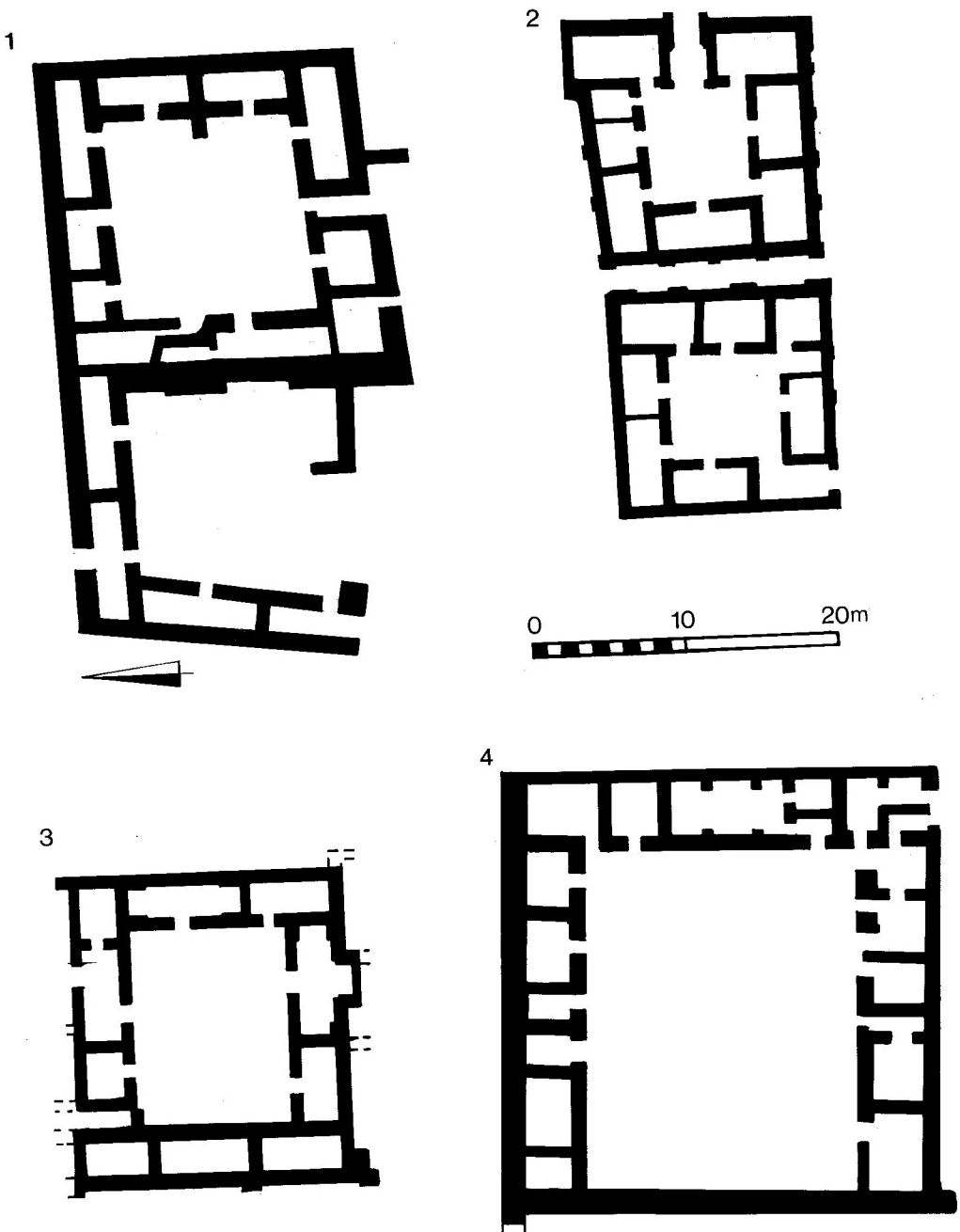
Fig. 8 – Courtyard houses: 1. Henchir Faouar (after Mahjoubi); 2. Siraf (after Whitehouse); 3. Qal'a of the Beni Hammad, private apartments (after de Beylie); 4. Cordova (after Hoag). North at the top of the page, except where indicated.

of this plan, especially in the proportions of the rooms [17], although here the roofs are vaulted. The module is most evident in the women's quarters (fig. 8; 3), where the traditional house, and the family structure it reflected, were evidently appropriate. Again, the Sassanian-Hellenistic *iwan* characteristic of palaces in the Eastern Mediterranean is missing.

The plentiful evidence for this type in the Maghreb and Spain may have been one of the factors that led Terasse to suggest that it was Roman in origin[18] . This hypothesis can, however, be discarded. In the Roman houses of the Maghreb, the court, or peristyle, was enclosed by the house [19]. As we have seen, the islamic courtyards contain the rooms. Further, the limitation of the single-pitched roof would be inexplicable if the house-type derived directly from Roman houses, with their infinitely greater spans. Nor is an indigenous origin for the type more plausible. It contrasts sharply with modern houses in the Aurés and the Kabylie. At Timgad (*Thamugadi*), where there is evidence for post-Byzantine housing in an apparently Berber tradition, there are very irregular rooms, with no obvious courtyards [20]. It seems, then, that a North African origin may be excluded.

A source farther east seems more probable, in spite of notable differences between the Maghreb house type and that found in the earliest Ummayyad palaces, or the houses of Fustat. The striking similarity with tenth-century housing at Siraf, in Iran, seems to confirm this view (fig. 8; 2) [21]. Although these buildings show a far greater level of architectural detail, the basic plan remains the same – and it is radically different from that of the earlier Sassanian building on the same site.

We thus have a consistent pattern in domestic architecture in the ninth and tenth centuries, which can be found from Spain to the Persian Gulf. Although the spread of this plan can almost certainly be linked to that of Islam, its origins lie somewhat earlier.

Housing before the conquest

It was once taken for granted that pre-Islamic Arab architecture simply did not exist. « Mahomet was an Arab chief and the Arabs were barbarous tribes of the desert with no art and no materials for art, except for the art of poetry.

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[17] *Ibid.* p. 190; L. DE BEYLIE, *La Kalaa des Beni-Hammad*, Paris 1909.

[18] *Loc. cit.* note 3.

[19] For a recent discussion of Roman housing in the Maghreb, see Y. THÉBERT, *Vie privée et architecture domestique en Afrique romaine*, in P. Veyne (ed.), *Histoire de la vie privée*, Paris 1985.

[20] J. LASSUS, *La forteresse byzantine de Thamugadi*, Paris 1981, plan 1.

[21] WHITEHOUSE, 1970 (*op. cit.* note 1), 11.

Painting, sculpture and architecture were alike unknown to them » [22]. The site of Umm el Jimal, in the Haurani area of North Jordan, was recorded by Butler in 1907 shortly after these lines were written [23]. Even though the site yielded literally hundreds of 4th to 6th century A.D. inscriptions, which showed unequivocally that the inhabitants of the little town were Arabs [24], the importance of the site for the study of Arab architecture was ignored. Figure 9 shows the plan of the town in the sixth century, and the similarities with the Maghreb houses are evident: only the right-angled entrances are missing. The plan, however, does not make clear in one fundamental difference between the houses of Umm el Jimal and those of Sétif, and this is the nature of the roofing. In the treeless lava lands the absence of wood created certain problems. The solution was a covering of large, thin slabs of lava, mounted on stone corbels. This solution could not be easily exported, but it does suggest an explanation for the lack of a ridgepole in the Maghreb houses: their basic architecture was developed in regions where wooden roofs were unthinkable [25].

A second piece of evidence comes from an often-quoted text of Ibn Sa'ad, who cites the description of the house of the Prophet given by a man called Abd Allah ibn Yazid [26]. The text, translated by Creswell, gives the dimensions of the courtyard as 100x100 cubits, or approximately 50x50 metres. Along the south wall was a portico, roofed with palm branches, and against the east wall were built the huts of his wives, which were added to periodically as the number of wives increased [27]. The essentials are the same: the square, enclosing courtyard, the rooms built against the outer wall, the rudimentary roofing. The portico is a new element, but this would be natural in the hotter climate. The courtyard is also far bigger — at around 50 m. square, it is over twice the size of the standard Maghreb house. Archaeological traces of just such a house come from the Ummayyad Qsar Dauqara in northwest Saudi Arabia [28], some 42 m. square, although the rooms are proportionately less narrow than the North

[22] W. WARE, *Saracenic Architecture*, « Harvard Engineering Journal » IV, 1905, 1-78.

[23] H.C. BUTLER, *Princeton Archaeological Expedition to Syria*, I, A, 3, Princeton 1913; B. DE VRIES, *Urbanizations in the basalt region of North Jordan in Late Antiquity, the case of Umm al-Jimal*, in Hadidi (ed.), *Studies in the history and archaeology of Jordan*, II, 1985, 249-256.

[24] E.A. KNAUF, *Umm el-Jimal: an Arab town in Late Antiquity*, « Revue Biblique » 91, 1984, 578-586.

[25] Arches were occasionally used here and in the rest of the Hauran to support greater spans.

[26] Ibn Sa'ad, *Tabagāt*, I², 180, translation in CRESWELL (*op. cit.* note 4), p. 6.

[27] Creswell (*ibid.* p. 7) in fact reconstructs the rooms of the wives as built *outside* the courtyard, with a series of doors piercing the courtyard wall. This has no parallel with any known buildings, and one might suggest an error in the text or its translation: 'against the outside of the courtyard wall' for 'against the outside wall of the courtyard'.

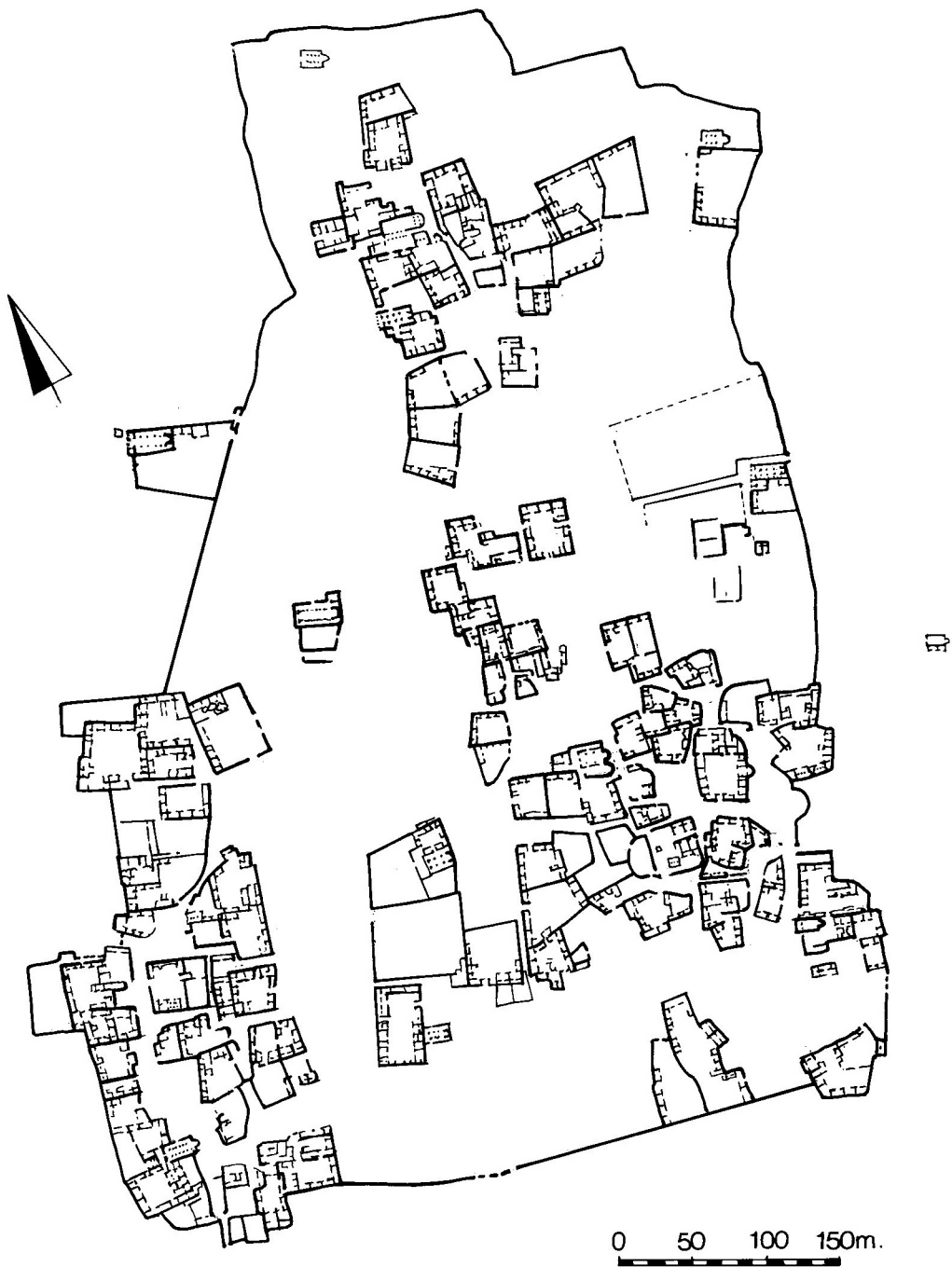[28] H. FIELD, *North Arabian Desert Archaeological Survey, 1925-1950*, Cambridge, Mass. 1960, 126, fig. 32.

Fig. 9 – Umm el Jimal (after De Vries).

African examples. Qsar as-Swab, southeast of Palmyra, is similar in plan and date, although it has three complete wings [29]. But are these houses? That of Muhammad was also a meeting place, and served as a home for the poorest of those who had followed him from Makka. It has been plausibly argued that Qsar as-Swab and Qsar Dauqara were stations on major roads, serving in effect as small caravanserail. It may thus be that the basic elements of our design derive from this source: large enclosures for stock with small rooms for sleeping, for goods, and for wives.

The plan is simple but effective, the square rigorously adhered to. Its simplicity leaves much room for doubt as to its antecedents, and there is no denying that many Eastern Mediterranean forms resemble it, from Nabatean houses to Roman forts [30]. No single origin is necessary. But it can no longer be denied that the form existed in the Arab world before Islam, and that it was brought to the Maghreb with Islam. This brings us a final question. Why was this house so well suited to Islamic society in the Maghreb?

3. The houses and society

Between the invention or importation of a model and its acceptance there is a gulf; acceptance depends on the fit of the model or the new technology to conditions already existing in the society. We still have no idea how quickly the type became generalized in the Maghreb – certainly it was never adopted in the predominantly Berber mountains. At Sétif we find it fully developed, and are unable to trace the intervening steps, or to be sure of the cultural affiliation of its inhabitants. What can we deduce about the society from the house itself?

The principal characteristic of these houses is the dominance of the courtyard over the rest of the building. Rather than being enclosed by the building, the courtyard seems to contain the rooms, simple lean-tos propped against its walls. Their relatively equal size, and the fact that they communicate only with the courtyard rather than from one to another, emphasize this dominance of the central space. Even those activities which took place within the rooms could be kept under surveillance from the courtyard. Access to the courtyard was limited by the single, right-angled entrance, which served as a visual screen as well as

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[29] *Ibid.*, p. 158-159.

[30] On Nabatean origins NEGEV (*op. cit.* note 1); a close parallel to the plan can be found in the Roman *limes* fortlets; see M. GICHON, *The Origins of the Limes Palestinae and the Major Phases of its Development*, in *Studien zu den Militargrenzen Roms: Vortrage des VI internationalen Limeskongresses in Sud-Deutschland*, Cologne 1975, 1, 75-193. These buildings have at least two stories. For a balanced discussion on military origins and Syrian parallels for early Islamic architecture: V. STRIKA, *Origini e primi sviluppi dell'architettura civile mussulmana*, Venice 1968, 37-57.

Dimensions

Building	e − w	n − s	m²	courtyard (m²)
I	15.5	18.5	286	94.5
II	12	17	204	108
V	21	9+	189+	
VI	18.5+	16	296+	135
VII	15.5	10+	155+	135+
VIII	20	15+	300+	236
IX	20	9+	180+	
X	19	25	494	363
XI		15+		
- - - -	- - - -	- - - -	- - - -	- - - -
Average	17.5	18.5	328	175
Average length x average width:			323.5	
Courtyard as % of total				53%

Table 1

a physical barrier, protecting the privacy of the women within. In the second phases of Buildings VI and X we can see traces of a move towards even greater seclusion for the women of the family: in both cases the courtyard was divided into two separate sections, in Building X by a wall, in VI by a suite of rooms. Visiting men would have had access to the reception rooms without having to pass through the women's courtyard.

Entrance into the courtyard was thus highly restricted, while access from the courtyard to the other rooms around it was extremely easy. This functions even at a visual level; as in the *panopticon*, anyone standing in the courtyard could see most of what was going on in the house. This highly centralized structure of the ordinary dwelling may well have reflected the structure of the family within it. Indeed, the patriarchal Islamic family, controlled to a large extent by a single individual, corresponds closely to this pattern. The other individuals who comprise the family stand in the same relationship to the father as the single rooms do to the courtyard: relatively equal in relation to each other, they are entirely subordinate to the central figure.

With the exception of Building X, the houses are remarkably similar in size, indicating a relatively equal status of their occupants, at least in this section of the town. Table 1 shows the relevant dimensions, from which an average size of 328 m² may be calculated. Of this, over half is taken up by the courtyard. The average building size is notably larger than that of the houses studied by

Lézine at Mahdīya and Tunis [31]. At Mahdīya, the average size of the single-storied houses was 190 m². At Sousse, the range varied from 130 m² for the very poor houses, to 226 m² for richer ones. At Qsar es Seghir in Morocco the average size of houses was only 50 m² [32]. The generally large size of the houses at Sétif may perhaps be explained by the expansion of the town towards its open periphery, but it might also indicate a relative ease enjoyed by the inhabitants of this area. It may be suggested that we are dealing here with larger households, as well as with more space for the individuals within them. In this area at least, wealth seems to have been relatively evenly distributed.

The ease with which new wings could be built inside them was a further advantage of the large courts. One such wing was constructed in Building II, another in Building VI. As sons married, the family dwelling could expand – again, we are reminded of the development of the Prophet's house. A certain level of cooperation between the houses is also apparent, as the construction of one also implied the partial reconstruction of the party wall of the adjoining house. It is, in fact, possible that the entire quarter represents the growth of one family or kinship group.

Conclusions

The perfect fit between houses and its inhabitants seems so obvious as to be banal. We assume that the one has both a functional and a symbolic relationship to the other. New techniques for examining these relationships, such as the semiological investigations of Venturi, or the newly fashionable 'space syntax' [33], are based on this perception. Indeed, one wonders, in a discipline that revolves around the study of how people lived, why the social implications of house types, and of domestic architecture in general, were ignored for so long. It is thus perhaps the time to propose a new series of questions. How do houses change? Do changes in social organization inevitably result in a new type of house? Or, vice versa, is the acceptance of a new house type, perhaps proposed by new elements in the society, an indication of social change? Do houses change people? The transition to the medieval period is marked by a change in urban house-type in Italy as well as in Africa [34]. Did the new type emerge fully

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[31] A. Lézine, *op. cit.* note 1.

[32] Redman (*op. cit.* note 1), 68.

[33] R. Venturi and C. Rauch, *Learning from La Vegas*, New York 1971.

[34] For the development of the medieval house in Rome H. Broise, paper given at the symposium « Aux origines de la ville moderne: structures matérielles et morphologie de l'éspace urbain dans les villes européennes (XIII-XVI siècles) », Rome 1-4 December, 1986, forthcoming; H. Broise and J.-C. Maire–Vigeur, *Strutture famigliari, spazio domestico e architettura civile a Roma alla fine del Medioevo*, Storia dell'Arte Italiana Einaudi, 12, 1983, 98-160.

developed, or did it develop gradually from the Roman house? What are the precise elements of the change? We would need to know much more before answering these questions: they are certainly worth asking.

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