

FROM MEDIAN TO ACHAEMENIAN PALACE ARCHITECTURE

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The Achaemenian *apadana*-type palace¹ appeared under Darius I. (522-486 BC) in its fully developed shape and continued to be built basically unchanged throughout the Achaemenian period (Fig. 1, 2, 10). The question of its formation remained open despite repeated discussions. A serious problem for the solution of the question is a certain incompatibility with its historically secured predecessors, the palatial buildings of Cyrus in Pasargadae². The basic problem however, seems to be the limitation of research to formal developments. Architecture cannot be understood as an art-historical phenomenon alone. It is the result of an entirety of habits of life, of functional, practical, technical, emotional traditional and esthetical factors³.

Therefore, as a precondition, we must try to understand how the *apadana* was used, how it functioned, what it offered to its inhabitants, why its special three-dimensional structure was chosen. The meagre remains in Persepolis and other sites scarcely allow us to find out more than Krefter's reconstructions⁴ and his or others' conjectural denominations did. However, taking into consideration the series of later Persian palaces and upper class houses, partly still in use, we can clearly recognize a simple but surprisingly attractive and intelligent principle of design,

¹ The commonly used term *apadana* for this special type of building is adapted here without regard of its not completely clear etymology and its uncertain meaning. cf. Herzfeld, 1941, p. 352, n. 2; Schmidt, 1953, p. 70, Stronach, 1978, p. 72, n. 96; id. 1987, pp. 146-148; Schmitt, 1987, pp. 145-146.

² cf. Nylander, 1970, pp. 102-103, 115. Herzfeld, 1929-1930, p. 16, gives a rather schematic view of the architectural development without concrete arguments. For a review of the early development of Iranian palatial architecture see Stronach 1978, pp. 70-74.

³ See also Nylander 1970, p. 110.

⁴ Krefter, 1971.

which can be traced down from the Qajar to the Sasanian period and which very probably reaches back into earlier times⁵.

The traditional Persian palace or rich house is, or was until recently, a combination of one or more high, spacious hall or halls of whatever shape or construction, with surrounding or adjoining wings with two, sometimes more stories of small rooms. The halls were, or are, used for representation or any occasion of private or public common and social life; the side wings, specially the upstairs rooms, for any kind of private life only. They always have view connection with the halls by windows, allowing the more secluded inhabitants, e.g. women, children and others, to participate from far in what is going on in the halls. Arranging living rooms in elevated stories has many advantages. It provides not only better protection from hostile physical attacks but also from humidity, dust, dirt and animals; and especially in hot countries cool breezes at high places can provide a more agreeable climate. Therefore, elevated living rooms are a frequent characteristic feature of upper class houses worldwide⁶. The amalgamation of an elevated living area with tall ground floor halls of representation into a well balanced unit of outstanding practical and esthetical qualities was a special achievement of Iranian house and palace architecture.

Flandin's drawings of the throne hall in the Golestan Palace in Teheran from mid 19th century⁷ shows the possibilities of interactive life in a Qajar palace in a most instructive way (Fig. 4). From a kind of upper gallery in a side wall, which belongs to the upper story of the side wing, women are looking down to the marble throne in the aiwan, the place where the king will give his audiences and receptions. The facades of these buildings with their obligatory axiality and symmetry give clear evidence of the distinction between the high central hall and the multi-storied side wings, with no regard of the construction, vaulted or with columns and horizontal beams (Fig. 3).

⁵ cf. Huff, 1978, p. 237-243; id. 1987, p. 332-333; id. 1993, p. 50-53; id. 1999 p.141-160; id. 2001, p. 192-196.

⁶ Already Herzfeld, 1941, p. 224 pointed to this Oriental habit in a general way. cf. Also the modern terms "belle étage" and "piano nobile".

⁷ Flandin / Coste, 1843-1854, Pl. 31-32. See also the numerous other illustrations of buildings of that type in Flandin / Coste's volume.

The architectural system is also clearly shown by a simple town house in the ruined city of Bam. Behind a narrow courtyard, the wide aiwan with destroyed roof gives view into the upstairs room at the rear of the house and to the likewise two-storied side wings (Fig. 5).

It is not possible to demonstrate here the extraordinarily great variety of designs and constructions which this basic architectural idea has created, and of which preserved examples since Safawid time can be studied in great number still today. The idea survived even into the 20th century⁸. Only some prototypes of major importance can be mentioned here.

The famous but rarely right-understood Ali Qapu at the great square of Isfahan carries, above the entrance gate to the royal Safawid palace- and garden-city, a partly two-storied building unit, which gives the most comprehensive impression of a Persian palace (Fig. 6). A great hall with a short aiwan and a large lofty *talar*, a porch with slender wooden columns is surrounded by two stories of charming small living rooms with fire places, the upper ones with floor-level windows towards the halls and small, lateral balcony aiwans, forming an elevated, purely private sub-palace in the palace⁹.

Of special interest in our present context is, as we shall see, the palace of Hasht Behesht, the "Eight Paradises". This gigantic garden pavilion behind the Ali Qapu is an extraordinarily refined, geometrically enriched and perfected variant of the former one. Its central hall is surrounded by three aiwans on three sides, between four two-storied corner blocks of small, private rooms¹⁰ (Fig. 9).

Nearly 1300 years earlier, the two palaces of the first Sasanian ruler Ardashir I. (224-240 AD) at Firuzabad had the elevated rooms of the private area spared out from the massive masonry around the vaulting of their halls of representation. In the earlier palace, Qal'a-ye Dukhtar, there was a system of corridors and corner rooms high up, at squinch level of the

⁸ A recent example is the palace of the mother of the last Shah in Sa'dabad Teheran, from the 1960ies, where the central hall is surrounded by two stories of rooms, the upper rooms with private suites accessible via a gallery which runs all around the hall in mid height.

⁹ Kaempfer, 1712, pp. 164-165; Zander / Ferrante, 1968, pp. 137-206; Galdieri, 1979. The third, completely secluded unit on top of all is a second, but reduced, tiny palace with private rooms around a central hall, strictly reserved for the women of the court.

¹⁰ Kaempfer, 1712, p. 172-174; Zander / Ferrante, 1968, pp. 399-420.

domed hall, with a special spiral staircase, a guard room upstairs, opposite the wide entrance, and windows into the domed hall, the side halls and the aiwan¹¹ (Fig. 7).

The second, more solidly built palace, Atash-Kadeh, has two upper stories: A semi-official one at squinch level, with wide corridors and high openings into the three domed halls, the opening between central hall and aiwan arranged as a throne seat visible from either side. The private story proper, on top of the first, has, in addition to wide and long halls, suites of barrel vaulted and domed rooms¹². The elaborate layout of these upper stories as well as their wide and comfortable square staircase leave no doubt, that this was the private area of the royal family and not only servants' rooms and a stair to the roof (Fig. 8).

The unusually complete preservation of these two Sasanian palaces makes them, beyond their values of their own, extraordinarily important witnesses of the Persian type of palace for the early and pre-Islamic periods, from which scarcely any other palaces have survived more or less total destruction. It is due to these two buildings, that an upper story can also be proven at the ruin of the greatest Sasanian palace, the Taq-i Kisra at Ktesiphon. Traces of small rooms at the rear walls of the aiwan, with windows, which still show remains of a grid of brick work, confirm beyond doubt, that the rooms of widely differing size, the foundations of which were excavated on all three sides around the aiwan, carried one or more upper stories of the private living rooms of the royal family also here¹³.

If we return now to the Achaemenian *apadana*¹⁴, we have to recall once again the plan of the Safawid Hasht Behesht palace. Both buildings have basically the same layout with a central hall and three aiwans on three sides between four corner blocks of rooms (Fig. 9, 10). In spite of their generally centralistic plan they have a clear main axis with a front facade and a more or less closed rear part. Constructive and stylistic differences are the natural result of innovations during the span of 2000 years, which

¹¹ The upper story was abandoned and walled up, when the bold but unexperienced construction began to crack. Huff, 1971, pp. 127-171; id., 1978 b, pp.117-147.

¹² Huff, 1971, pp. 154-160; id, 1993, pp. 48-51.

¹³ Huff, 1971, pp. 150-154.

¹⁴ Schmidt, 1953, pp. 70-106; Stronach, 1987, pp. 146-148. The so-called *apadana* of Persepolis is taken as the best preserved and studied example of its type, not regarding any chronological priority of the buildings at Persepolis, Susa or Hamadan.

separate both buildings. At Hasht Behesht the vast hypostyle hall is replaced by a rather small but high central dome, while high and slender columns were kept in the aiwans. (The aiwan became the only hall of representation in Qajar palaces as we saw in the beginning at the Golestan palace in Teheran). Highly sophisticated small rooms in the four corner blocks and the rear of Hasht Behesht have replaced the narrow, mostly uniform rooms with massive walls in the corresponding corner and rear parts of the *apadana* ground floor. The basic similarity of both buildings is certainly not the result of copying; the Safawid architects could not have used an Achaemenid model, the mud brick walls of which were only mounds of debris with some stone columns and doors sticking out after two thousand years, as it is shown by contemporary drawings¹⁵. The similarity is the result of unchanged requirements of the king, or any member of the elite or upper class, who had approved this type of building in all its manifold variations as the optimal house for their way of life since generations¹⁶.

There was never any doubt about a generally ceremonial or representative function of the central hall and the aiwans of the *apadana*, although excavations did not reveal any detailed information about the ceremonies proper, which formerly were going on here¹⁷. Also commonly accepted is the opinion that the narrow rooms in the corner towers and the rear were magazines or storerooms. Here, however, the excavation results are not only indifferent, but, together with an analysis of the excavated layout, they strongly contradict the possibility, that these parts of the palace were designed primarily as mere storage facilities.

In his painstaking report E. F. Schmidt writes about the corner towers: "The shapes and the locations of these rooms rather than the meagre remnants of their former contents mark them as store rooms." — and, regarding the back-part rooms: "rooms whose form, location and to some extent contents mark them as store rooms"¹⁸. The argumentation is a vicious

¹⁵ See e.g. Tavernier, 1676/1930, pp. 296-297; Kaempfer, 1712, p. 334; Niebuhr, 1774-1778, pp. 121-163, Pl. 18-19.

¹⁶ A parallel observation can be made in religious architecture. A late 19th cent. fire temple of the Parsee community in Bombay has a very similar layout as a 6th cent. Sasanian temple at Takht-i Sulaiman. cf. Naumann / Huff, 1975, pp. 156-164, Fig. 60-61.

¹⁷ Schmidt, 1953, pp. 78-81.

¹⁸ Schmidt, 1953, pp. 74-75.

circle, taking the result for its own proof. The rooms were certainly used as junk rooms, and especially the backward chambers, where pieces of precious metal were found, may have been used, as Schmidt convincingly suggests, keeping... “the accessories of royal pomp and circumstance, displayed during great functions of state”...¹⁹.

This however was certainly not their main and primary purpose. At the corner tower an entrance gate of 2.70 m widening inside to a gate niche of 3.25 m is certainly out of proportion for mere storerooms (Fig. 11). It is unsuitable for that purpose all the more, if it was originally guarded by the two well known but somewhat enigmatically perceived sculptures of apotropaic beasts, which were found behind the gate, where they had been removed from their former position on either side in front of the gate already in antiquity²⁰. The gate leads from the aiwan into a large vestibule, from where the access continues by a second gate, 1.65 m wide and shifted from the axis like the entrance of every Oriental private house. The following passageway with its 3 m width takes unnecessarily much space from a storehouse. At its far end is a long staircase²¹, 1.40 m wide, with two flights of extremely low (16 cm) and deep (up to 40 cm) steps, which certainly was not designed only to lead to the roof. This clearly was the sumptuous entrance to a highly important and richly equipped part of the palace, occupying the upper stories of each corner tower and the rear part of the building.

On ground floor the way of access passes around those narrow long rooms, which indeed give the impression of storerooms, and which certainly were used as such, as they were there anyhow. They were accessible from the vestibule, and they were connected with a front room, in which the excavators found evidence of a window towards the aiwan²², characterising it as a relief guard room behind the vestibule; and to be guarded was certainly the access to the upper stories of the corner tower,

¹⁹ Schmidt, 1953, p. 75.

²⁰ Schmidt, 1953, p.72ff., Fig. 29-30. 32. 45-47.

²¹ Taking the columns of hall and aiwans as a scale for the height of the corner towers, Schmidt (1953, p. 74) obviously restores three upper stories with three double flights of steps, all being store rooms. Above the lower massive double flight he suggests wooden stairs. However, as mud brick barrel vaults were used in the corridors of the fortification wall behind the terrace, we may assume barrel vaults for the stairs up to the roof of the *apadana* too.

²² Schmidt, 1953, p. 74.

not the few ground floor rooms or the distant entrance from the aiwan to the main hall.

Another detail observation gives evidence, that the so-called storerooms in fact were only substructures of upper stories. The thickness of their dividing walls differs considerably without any recognizable necessity regarding the ground floor plan. The reason can only be, that the layout of the ground floor takes regard of the upper story: the thicker walls carrying walls or other heavy loads above, whereas the thinner ones only supported less heavy loads like the ceiling or flooring between the stories²³.

In his minute report on the objects found in the corner tower, Schmidt points out the exceptional small size of some bell shaped bases, which have no place in the *apadana* ground plan, and the unusual find position of some of them in the debris, up to 50 cm above the floor. He writes: “We hesitate to believe that they fell from an upper story of the tower”²⁴. There was no reason to hesitate. Small bases make good sense as elements of interior architecture of high status suites in the upper private rooms of a royal palace.

Finally it was Darius himself who left us a note on the nature of the *apadana*. Only under this building he laid down the golden and silver foundation tablets, exactly at the corner points of the great hall and the four corner towers (Fig. 11). He closed his inscription with the sentence²⁵: “May Ahura Mazda protect me and my royal house”. Even if we acknowledge, that the royal house also means the family or dynasty, there can be no doubt, that the house in its basic meaning was included in his prayer. This becomes all the more evident by other foundation inscrip-

²³ The same goes for the newly found tower building at Ulug Depe, excavated by the French mission to Turkmenistan.

²⁴ Schmidt 1953, p. 74. Other find objects and lumps of mud bricks, baked by fire, which seem to have fallen from above, may also partly have come from upper stories of the corner towers.

²⁵ Schmidt, 1953, p. 70.7; Kent, 1965, pp. 136-137. This sentence could have given the answer to the wondering remark of Schmidt, 1953, p. 255: “there is no building at Persepolis which can be identified as a seraglio of the founder.” — This is not the place to discuss the interpretation of the so-called harem of Xerxes, which Schmidt, 1953, p. 255 ff. took over from Herzfeld, although he himself choose the more neutral term “Southeast Building”. But one should remember Herzfeld’s ironic remark on the “harem” (1941, p. 236), where he seems to ridicule his own interpretation: “Two features are striking: these ladies lived in a kind of cloister or dormitory, and almost none of the rooms can have had direct light. Did they live in the shadow to keep their fair complexion?”

tions, e.g. those at the southern wall of the Persepolis terrace, where he implores Ahura Mazda's protection also for this "fortress" and for "whatever has been erected in this place"²⁶. The *apadana* simply was the house of Darius, the royal palace, in which, perhaps for the first time, the area of official representation had been amalgamated with elevated areas of private life to a monumental architectural unit, the perfect esthetical and practical qualities of which made it the basic model of all later Iranian palaces. We should take the *apadana* as the first of the long series of Persian palaces, in which upper stories with rooms for private life were an integral part of the layout.

We have to leave out Pasargadae for the moment and turn to the meagre evidence of the Median period. Godin Tepe II is an extraordinarily instructive example of a Median manor house (Fig. 12, 13). Its history began with a hypostyle hall of 6 naves and an adjoining enclosure of uncertain destination. After successive additions of three units of narrow long rooms and of another hypostyle hall, it became an impressive architectural ensemble, certainly the seat of a local dynasty, which had become more and more powerful²⁷. The hypostyle halls are convincingly interpreted as assembly halls. They probably served for political, social or even religious gatherings of the clientele of the overlord. However, the interpretation of the narrow long rooms as "magazines", forming the economy or husbandry area of the manor, is as questionable as the "store rooms" of the Achaemenian *apadana*.

Also here the very precise excavation report deplors the lack of any evidence, pointing to the materials which might have been stored here. Like in the Achaemenian and the few other Median so-called magazines there is a total absence of storage vessels, so frequent in magazines of other cultures²⁸. The possibility that the narrow rooms were simply filled with grain like silos is very remote, because they completely lack the sophisticated silo technology, which was highly developed already in Bronze Age magazines²⁹. Some of the long rooms were later separated from their connecting corridor by thin walls with small loophole-like doors at some height above floor. These openings show traces of tear and wear by persons, animals or material passing, or better squeezing through,

²⁶ Schmidt, 1953, p. 63 (PDF, PDg)

²⁷ Young / Levine, 1974, pp. 29-36. 116-123.

²⁸ *ibid.* pp. 32-33.

²⁹ c.f. Seeher, 2000, pp. 356-367.

so that the report argues: “This suggests that the function of these rooms was such that it was not necessary for people to pass in and out of them with any ease or regularity”³⁰. Only in one case a room (No. 28), just behind the entrance to the “magazines”, showed traces of some human occupation by a fire place on the floor and some pottery.

It is evident, that also the narrow long rooms at Godin Tepe were primarily built as substructions. Of course people made use of them as junk rooms, perhaps as stable for small animals, and occasionally as shelter or sleeping place for grooms, servants and workmen. Their proper purpose however, was to carry the private living rooms of the landlord at a lofty height. The starting steps of a comfortable stair, ca. 1.80 m wide, is preserved in front of the western facade, in some kind of entrance construction inside the courtyard (Fig. 12, 13).

The rather unintelligible arrangement of these structures is obviously the result of frequent constructive changes and rebuilding. The excavators, well aware that there might have been some kind of second floor, pointed out the massive stone foundation of some of these structures, which “would seem to be the foundation for a complicated stair system to the second floor”³¹. The stair, the way of access to which is unclear³², seems to have turned left towards the southwest corner of the earlier, northern bank of “magazines” or substructions. This however proves by no means, that it already belonged to the first additions to the original layout (stage 2). Replacing an older one it may have led up to a platform in front of a monumental facade³³ with pilasters and recesses on top of the substructions, which was constructed when the southern bank was added (stage 3), and

³⁰ Young / Levine, 1974, p. 32. 116 Fig. 37.

³¹ *ibid.* pp. 33-34. As an alternative the excavators think of the remainders of a former corner tower (p. 43, footnote 27), which, however, seems less probable.

³² The access to the stair, which, regarding its dimensions, was a very important passage also giving way to the only entrance to the substructions, seems to have been blocked by the thin southern wall, which is part of stage 4. It is strange, that there did not exist any southern fortification wall during stages 1 to 3, regarding the unprotected gates of all structures of these early stages, all opening into this area. In this case, the strongly fortified northern front on top of the steep cliff does not make sense and was mere show. One should expect also an early southern fortification wall like No. 18, the beginning of which was excavated at the north east corner tower No. 17 and which probably turned around to protect the southern side of the manor. It might have been washed down the southern slope.

³³ It seems possible, that the semicircular structure No. 34 was introduced to enlarge the facade up to the southern separation wall.

from which the elevated palace rooms were entered. During stage 2, when only the northern two-storied addition existed, there might have been another simpler stair, the remains of which may be hidden in the irregular massive in area 3, or may have been removed.

Of special significance is the observation of great amounts of sherds, trash and human waste, at the eastern end of corridor No. 26, obviously a dumping ground and toilet³⁴. It is questionable, whether this deposit, especially if strongly mixed with human waste, was accumulated by people approaching on ground level. The possibility should be considered, that the waste was dumped from above, through a hole in the probably vaulted roof, either from a trash cabinet of the upstairs palace, or when the building was already partly ruined during squatter occupation, when the only entrance door to the substructions was blocked. The narrow long rooms must have been inaccessible altogether at that time, whereas some of the rooms on top may still have been occupied.

Finally there remains a somewhat trite but logical argument in favour of the assumption that the “magazines” in fact were substructures, carrying the private palace of the manor house on top: If not here, where else might the private area have been? There are no further substantial buildings around which could be claimed for that purpose. During the early stage 1, modest living rooms might have existed in the enclosure east of the hypostyle hall, as there had been later on, during squatter occupation. During the periods of major importance of the enlarged ensemble this certainly would not have been adequate.

As a conclusion we see, that the manor house of Godin Tepe provides sufficient evidence, that the two basic elements, which constitute the essentials of the Persian *apadana*, are already present in Median architecture. That Godin Tepe is not at all a particular case, is proven by the fact, that these two elements are also present in the few other examples of palatial or monumental Median architecture excavated till now.

The small fortification of Tepe Ozbaki near Qaswin, probably the seat of a minor chieftain, presents them in a very modest version, with just some larger rooms on ground floor³⁵, one however richly equipped, and a

³⁴ Young / Levine 1974, p. 43 footnote 28.

³⁵ Majidzadeh 2001, pp.5. 9-10. The largest hall (11 x 6,80 m) is painted white and contains a central rectangular platform (3 x 1,30 m, ca. 0,50 m high) which is regarded as an altar. A smaller, square room with a central column had benches along its four walls and might have been an assembly hall.

unit of extremely narrow long rooms, even narrower than the walls, and without any access, evidently mere substructures. The unit is built against the thick fortification wall, the surface of which certainly was incorporated into the area of the story of private rooms, accessible by a stair nearby (Fig. 14).

These present considerations certainly have implications for the most important Median site excavated till now, Nush-i Jan³⁶. The similarity of the Nush-i Jan fort with the corner towers of the *apadana* is evident³⁷, and the archaeological observations are similar, too. Like in Godin Tepe, the “fort” at Nush-i Jan was enlarged by additional narrow rooms or substructures, and there too is a hypostyle hall. However the two obviously purely religious buildings make Nush-i Jan a very special monument with problems of its own, reaching beyond the scope of our present considerations³⁸.

We have to ask now, when and where the two basic elements of hall and upstairs private palace were combined to the *apadana* type palace. Up to now there is no evidence that this step was done in the Median period. Nevertheless, the idea might have been in the air in the first half of the millennium, and perhaps the Hasanlu people had realised it already some hundred years before Darius³⁹. They perished however, and their solution did not survive, except for their square spiral stair towers.

We have to turn back now to Pasargadae where the true and next predecessors of Darius’ *apadana* were to be expected. There are two buildings with large hypostyle halls, regarded as palatial. Building S is surrounded by porticoes or columnar aiwans at all four sides; there are no traces of stairs and substructures either⁴⁰. So it has to be discarded in the present context.

Of greatest interest, however, is building P⁴¹ (Fig. 15). There are two extremely long columnar aiwans, reaching far beyond the long sides of the

³⁶ Stronach, 1969, pp. 9-13; Stronach / Roaf, 1978, pp. 1-24

³⁷ cf. Huff, 2001, pp. 193-194. — Other examples of this type of building are e.g. Tell Gubba, Iraq, (Fujii, 1981, p. 28, Fig. 10, pp. 149-152) and the tower building at Ulug Depe (v.s. footnote.23).

³⁸ The “altar” at Tepe Ozbaki has no similarities with that in the central temple of Nush-i Jan. It would be remarkable, however, to find religious elements in Median palatial buildings.

³⁹ Dyson, 1965, p. 198; Young, 1966, pp. 52-59.

⁴⁰ Stronach, 1978, pp. 56-77.

⁴¹ Ibid. pp. 78-106.

hypostyle hall, which lies between them. At the shorter sides of the interior hall, the rows of columns were continued by heavy rectangular pillars of mud brick, which by no means could have optically enlarged the space of the hall, as further columns would have done, but which must have given the impression of a wall with gaps, hiding the wall proper which stands behind the piers with ca. 1 m distance only. There is no indication of the height of these piers, but it does not seem probable that they had the same length as the columns, if they only carried the roof. They rather were introduced for a special purpose, e.g. for carrying and stabilising a more heavy load. They might have carried a wall, set back into the hall at approximately half height, for giving space to an outside room or gallery, projecting into the hall at half height.

This leads us to the problem of the two enigmatic empty areas outside the short sides of the hypostyle hall, between the protruding southwestern and northeastern wings of the porticoes, where no traces of cut stone architecture, continuing the hall or the porticoes could be observed. The reconstructions of deep aiwans or open-air gardens were not convincing⁴². Herzfeld's statement, that there were "groups of small living rooms, with mud brick walls and mud brick pavement, badly preserved and not exactly symmetric"⁴³ sounds like archaeological observation and seems to have been inspired by meagre foundations of thin, perhaps later walls⁴⁴. Primarily, however, he may have followed, as often the case, his spontaneous intuition. It is indeed difficult to believe that these empty areas were part of the final layout of the otherwise extremely well planned and executed building; a layout like that seems simply impossible. And in fact, the most recent excavation plans show that the mud bricks of the long side walls of the hall continue in the south corner of the northeastern empty space not only in line with the back wall of the southeastern portico and the shorter wall of the hall as they should, but spread out north up to a vague limit⁴⁵. Corroborating in some way Herzfeld's observation of a "mud brick pavement", this may otherwise point to mud brick structures which have filled

⁴² Francovich, 1966, pp. 203-204; Deshayes, 1969, p. 345; cf. also Stronach, 1978, pp. 92-93.

⁴³ Herzfeld, 1929/30, p. 13.

⁴⁴ Stronach, 1978, pp. 92-93; see also p. 81, Fig. 40, plan by F. Hinzen 1963, and Fold-out 5.

⁴⁵ *ibid.* p. 81, Fig. 40 and Fold-out 5.

these areas, or which were planned here. The excavators had reasons to assume that building P was never accomplished to its originally planned design⁴⁶.

As a working hypothesis we may therefore consider the possibility, that Pasargadae palace P may have been planned as the real full size palace of Cyrus, as a first attempt of a Persian palace in which halls and aiwans of representation were combined with the private area of the royal house. It might be the missing link between the manor house of Godin Tepe and the *apadana* of Darius. We have to realise that mud brick was the most normal and original building material in Iran, and that even in Persepolis the greater volume of construction was mud brick, with cut stone used preferably in representative and decorative context. The mixture of both was regarded as natural and legal up to present. Therefore the possibility that the complete private part of a palace, like P, consisting of mud brick, was inserted into a frame of cut stone columnar architecture would be nothing extraordinary. The seemingly empty areas southwest and northeast of the central hall might well have contained, or might have been intended to contain, large two-storied cubes of mud brick structures, offering sufficient space for the royal household⁴⁷. In this context also the rectangular mud brick piers at both ends in the hypostyle hall might find an explanation. They could have carried, as suggested before, galleries or rooms with windows, connecting the upper story of the private areas with the official hall. At ground level, the piers would have created a zone of transition between both areas, partly concealing the connecting doors and making inconspicuous who was entering or leaving the hall⁴⁸. It remains to be seen, whether future archaeological research can achieve solid results for the interpretation of these two white spots in the layout of palace P⁴⁹. Until then the suggested reconstruction remains hypothetical.

Whatever the outcome, the final step in the creation of the *apadana* palace obviously was made under or by Darius. This would not be the only

⁴⁶ *ibid.* p. 85.

⁴⁷ Some kind of domestic use at least in later Achaemenian time is also assumed by the recent excavator, see Stronach 1978, pp. 93, 103.

⁴⁸ A predilection for some kind of narrow side aisles and even more for narrow surrounding corridors can be observed throughout later Iranian architecture.

⁴⁹ R. Boucharlat, CNRS, Lyon, has kindly offered to survey these two areas during the continuation of his program of geomagnetic prospection in Pasargadae in December 2003.

epoch-making innovation of his reign; it was certainly Darius himself, who was responsible for the iconographic program and the artistic design of the royal Achaemenid rock tomb, replacing the house-type tomb, which Cyrus had established and which had only one unfinished Achaemenian successor, Takht-i Rustam. There may have been a parallel change from a Cyrus type of palace to the *apadana* of Darius.

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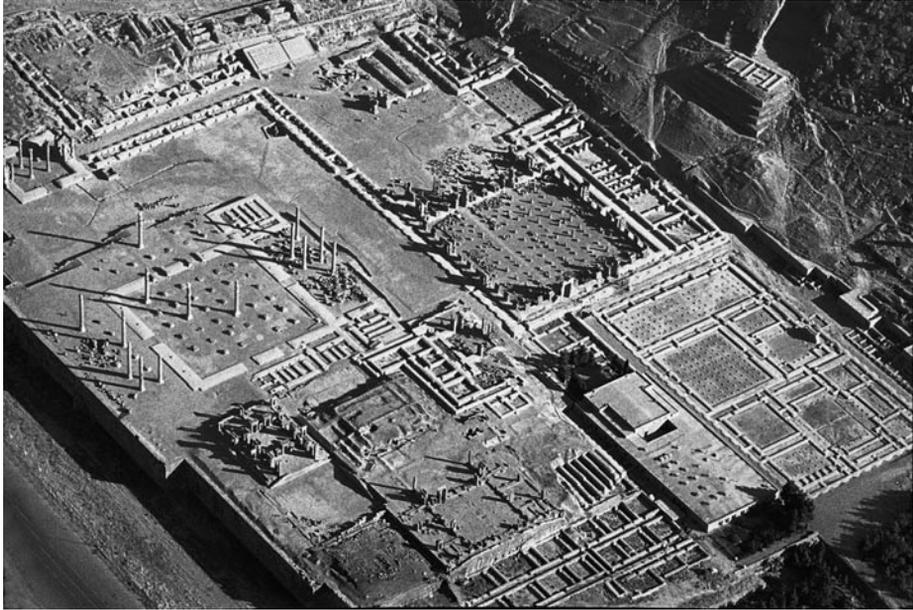


Fig. 1: Persepolis. The air photo shows the dominant architectural quality of the *apadana* (left) among the other buildings of the palace platform. (Photo G. Gerster)

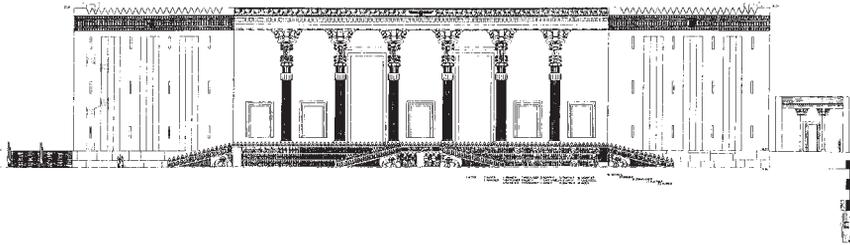


Fig. 2: Persepolis. Main facade of the *apadana*. Reconstruction by F. Krefter. (Krefter, 1971)

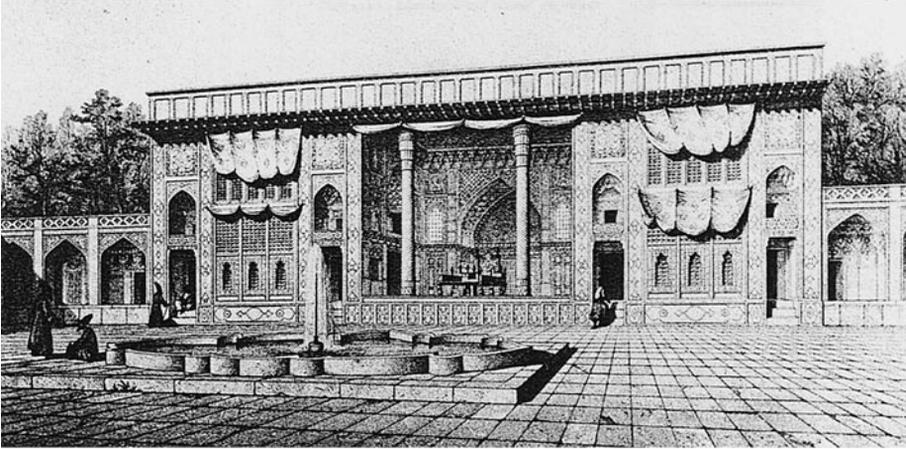


Fig. 3: Teheran. Golestan palace, Qajar period (after Flandin/Coste, 1843-1854).

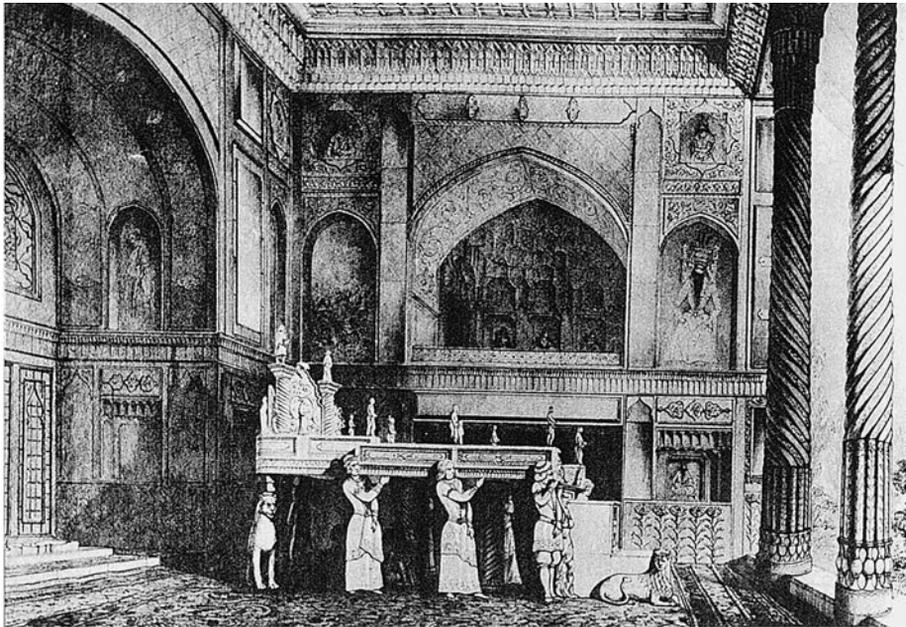


Fig. 4: Teheran. Golestan palace. Interior of the audience hall. Women looking down from upper story gallery to the royal throne (after Flandin/Coste, 1843-1854).

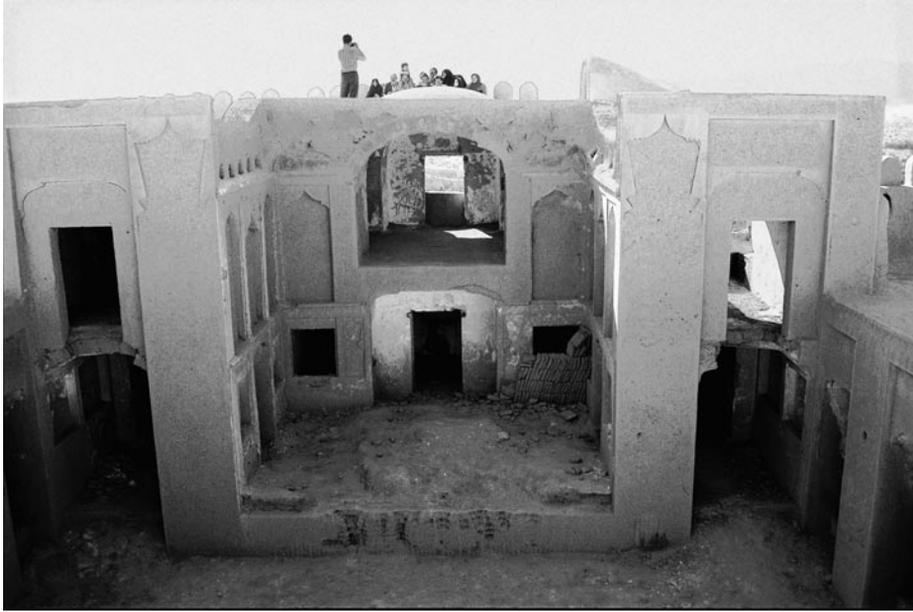


Fig. 5: Bam. Private house. Aiwan, roof destroyed, surrounded on three sides by two-story wings of rooms (Photo D. Huff).

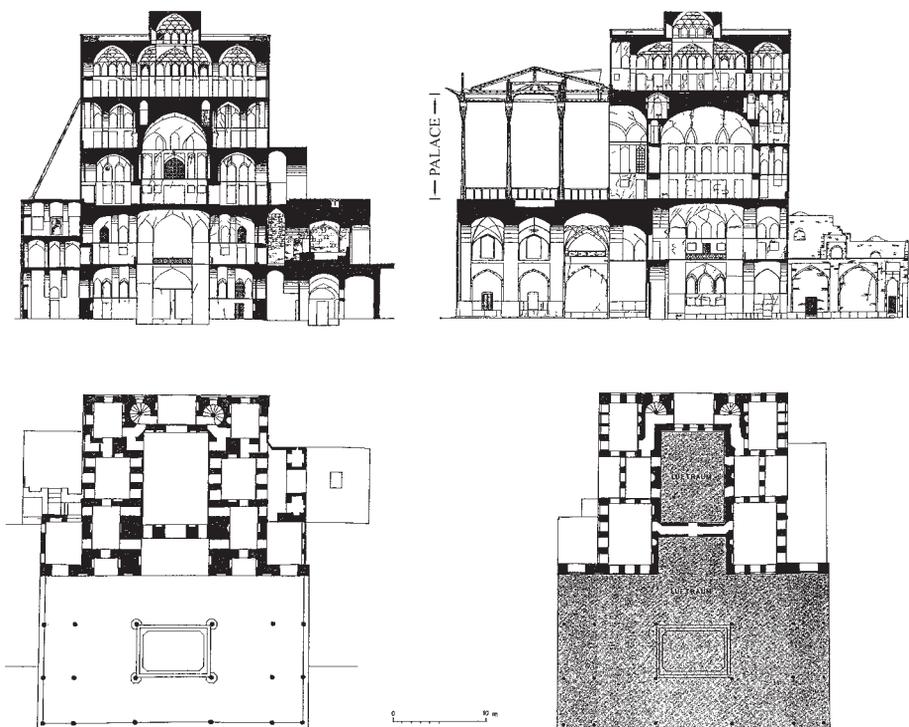


Fig. 6.: Isfahan. Ali Qapu. Plans and sections of ground and upper floor of the royal palace, erected on the gate building of the palace area (after Zander/Ferrante, 1968).

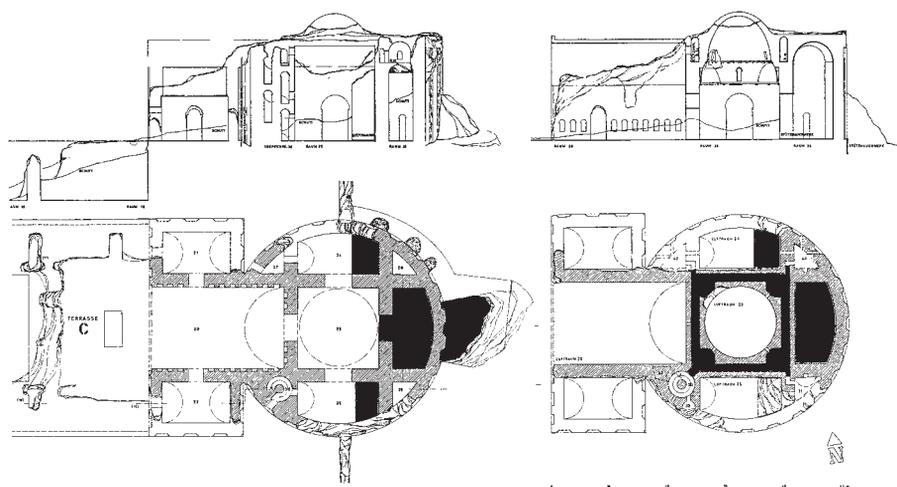


Fig. 7: Firuzabad. Qal'a-ye Dukhtar, first palace of Ardashir I. Plans and sections of ground floor and of upper story around copula. (Black areas: Consolidating masonry, walled up in ground floor and upper floor rooms during Sasanian repairs).

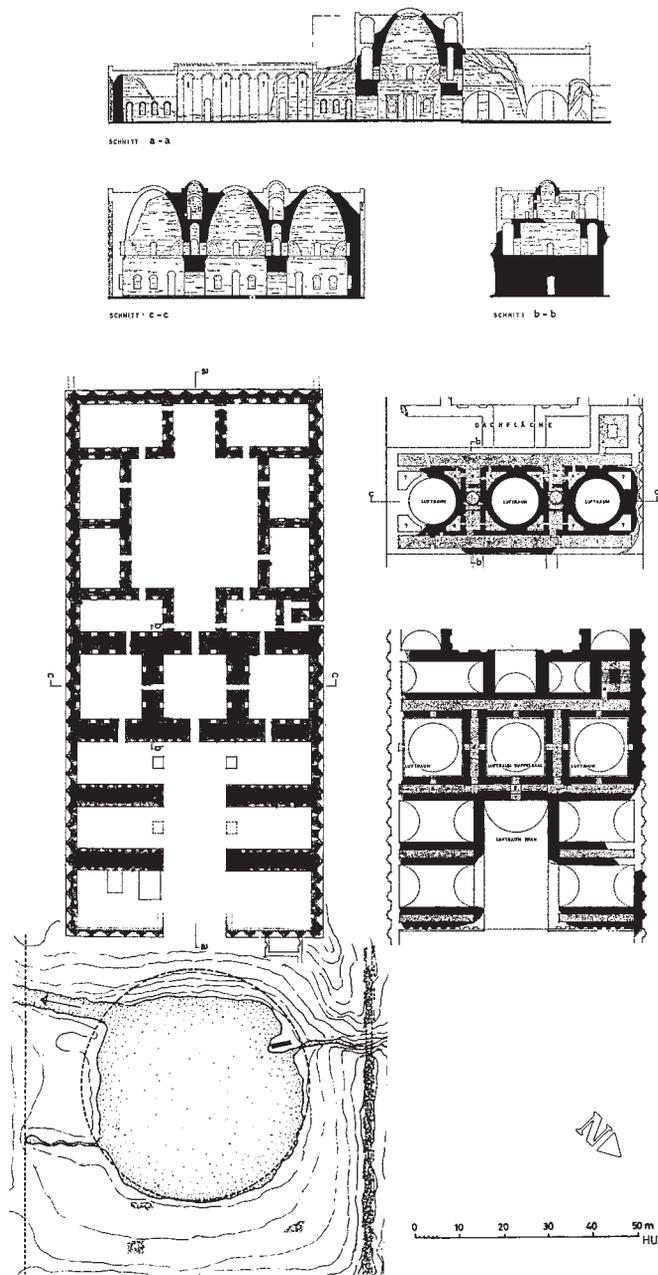


Fig. 8: Firuzabad. Atash-Kadeh. Later palace of Ardashir I. Plans of ground floor, first and second upper stories.

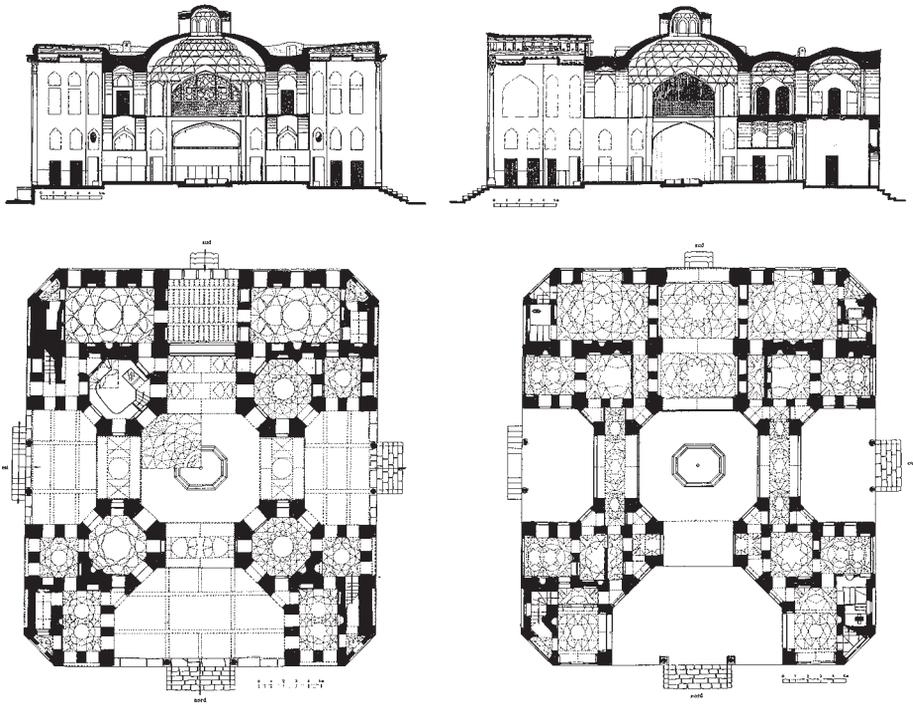


Fig. 9: Isfahan. Hasht Behesht. Safawid garden palace. Plans and sections of ground floor and upper story (after Zander/Ferrante, 1968).

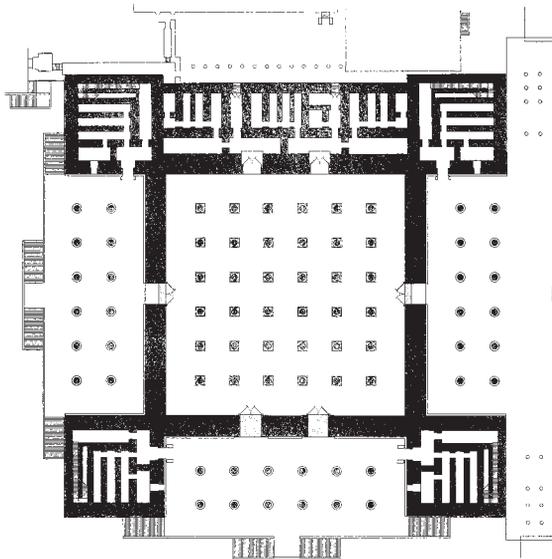


Fig. 10: Persepolis. *apadana*. Plan of ground floor (after Schmidt, 1953).

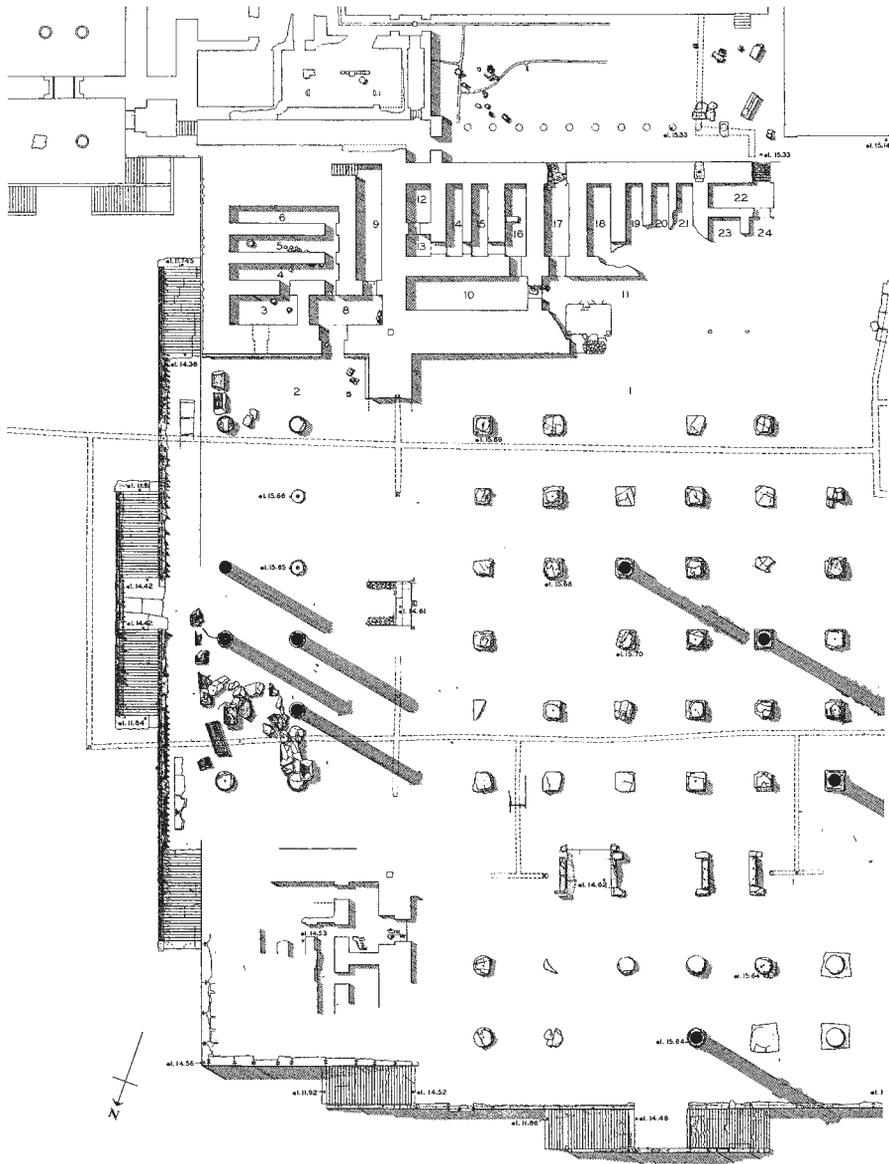


Fig. 11: Persepolis. *apadana*. Excavation plan of the eastern part of the building (after Schmidt, 1953).

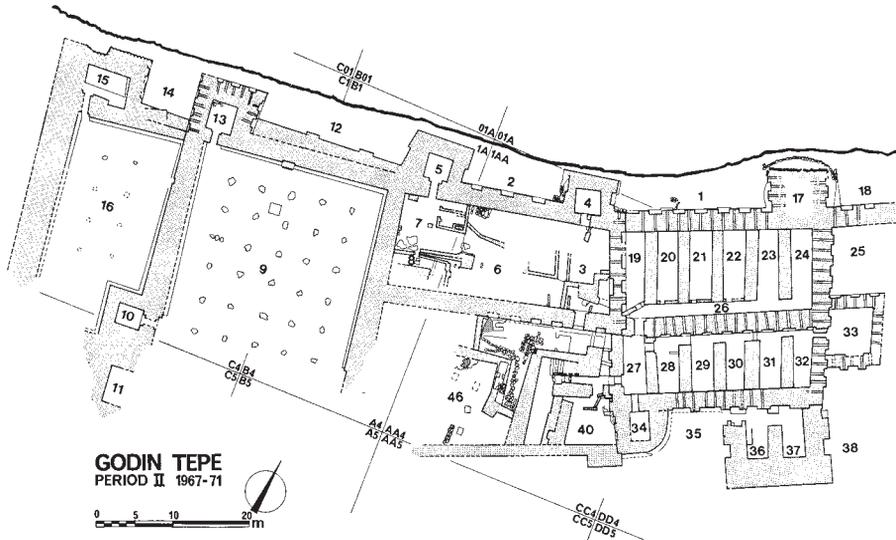


Fig. 12: Godin Tepe. Median manor house. Stages of enlargement (after Young/Levine, 1974).

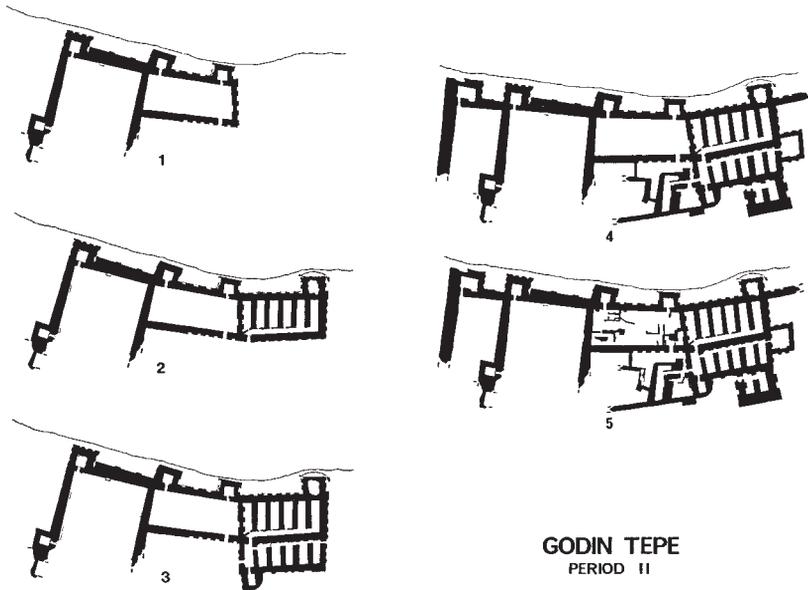


Fig. 13: Godin Tepe. Median manor house. Plan of ground floor (after Young/Levine, 1974).

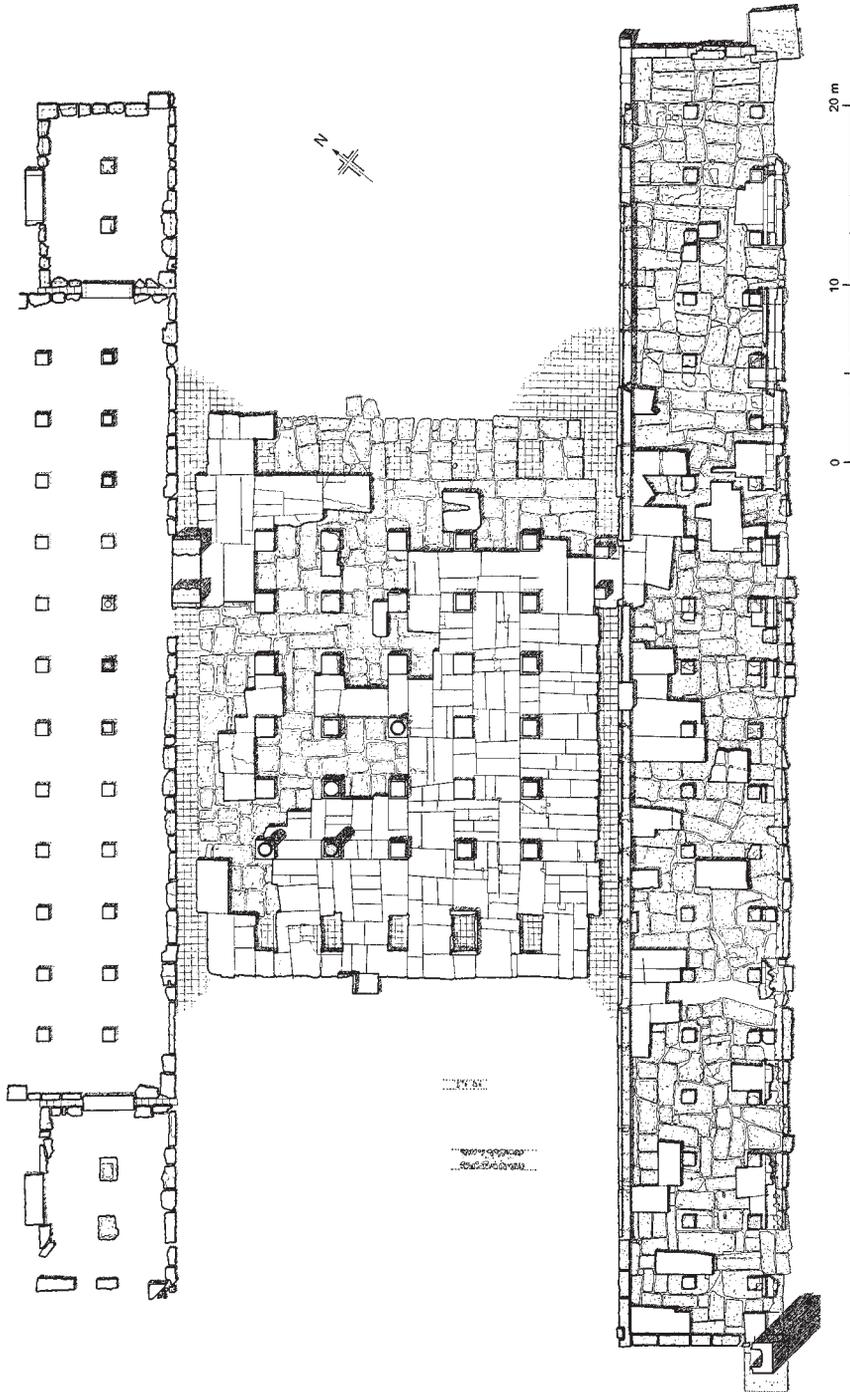


Fig. 15: Pasargadae. Palace P. Excavation plan (after Stronach, 1978).