

The Iron Age Architecture at Hasanlu: An Essay

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One of the most important results of the excavation of Iron Age Hasanlu is the recovery of well-preserved architectural remains dating to the 9th century B.C., including buildings, gates, courtyards, and roadways. These structures, destroyed by a catastrophic fire, provide a closed context for thousands of artifacts buried in their ruins and afford an opportunity to examine the way in which various areas within the settlement were used. Patterns in artifact distribution may be observed not only at the ground floor level, but also in the collapsed remains of second floors. The buildings themselves show evidence of a long history, providing a view of the local evolution of architectural forms over a period of four or five centuries, beginning in the late 2nd millennium B.C.

Hasanlu Tepe

Hasanlu Tepe is located in the Solduz valley at the southwest corner of Lake Urmia in Azerbaijan province, Iran (Fig. 24). The site consists of two distinct topographic zones: a high, flat-topped mound (or "tepe" in Persian), and a lower mounded area (see Dyson, "Rediscovering Hasanlu," Fig. 1, this

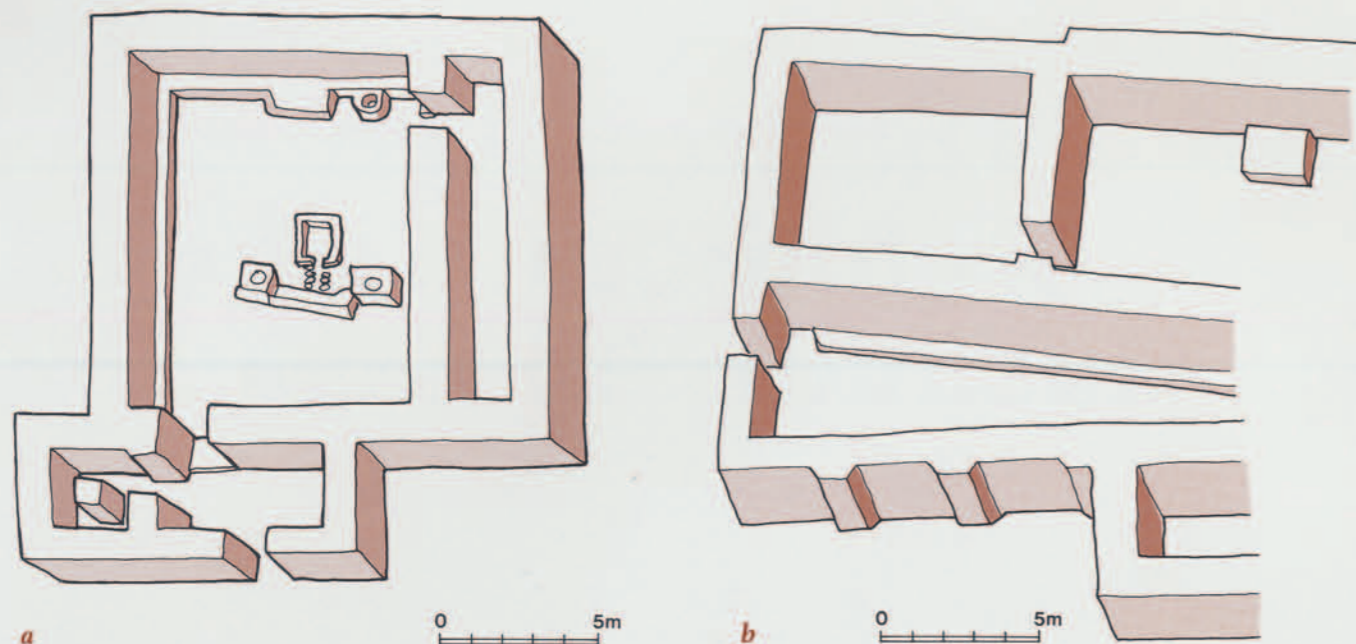
issue). For convenience, the central high mound has generally been referred to as the "Citadel Mound" and the low surrounding area as the "Outer Town"—even though the function of each area changed through time—a usage found in some of the articles in this issue. These descriptive names are misleading for Hasanlu periods V and IV, when the "Citadel Mound" was not strongly fortified and the "Outer Town" was probably not inhabited, but instead used as a

cemetery. Within this article, therefore, we will use the terms "High Mound" and "Lower Mound."

The entire site represents occupational debris built up in superimposed layers. The earliest Iron Age occupation, which began shortly after 1500 B.C., is represented by archaeological remains referred to as Hasanlu period V; these lay beneath later buildings and debris dating to between the 12th and 9th centuries B.C., called period IV. By 1977, the last season



1 General view looking southwest over the Lower Court during excavations of 1974. Stelae of Burned Building IV are at center right, the buttressed east facade of Burned Building I-East lies behind standing central figure, and the portico of Burned Building II may be seen at left center. (Photo courtesy of the Hasanlu Project)



2a,b

(a) Sketch of the period V domestic house excavated in 1962 on the northwest part of the High Mound. The stairway at the front left is restored on the basis of a similar building reconstructed just above, in which the stair was preserved. The stair, anteroom, main room with two wooden columns set on stone slabs and surrounded by mud plaster bases, central hearth, wall footings, rear platform, and side storage room initiate the standard plan for the later period IV buildings at Hasanlu. The main room shown measures 9 by 11 m. (b) Part of a large public building was found below Burned Building I-East; it is different in plan from the domestic structure and is enhanced with buttresses along its facade. (Both drawn by the author)

of research at Hasanlu, it was apparent that the period IV remains could be subdivided into an early stage called period IVC, dated roughly to the 12th century B.C., and a later, more elaborate, and better preserved stage, period IVB, dated to the 11th-9th century. Periods IVC and IVB both ended with fires (see "Rediscovering Hasanlu", Fig. 5). After the destruction of the period IVB buildings at the end of the 9th century, only a few survivors inhabited the site (period IVA) until they too were burned off. Later, in the late 8th century, the Urartians who controlled the lands around Lake Urmia and eastern Turkey reoccupied the site (period IIIB).

Iron Age Excavations in Northern Iran

Prior to 1957, the early Iron Age in northern Iran was known primarily through the excavations of

the French archaeologist Roman Ghirshman at Tepe Sialk, located on the edge of the central Iranian desert near the modern city of Kashan (Fig. 24). At Sialk, 15 tombs furnished with burnished pottery vessels as well as ornaments and weapons were found ("Cemetery A"). The presence of two iron objects placed Cemetery A tombs within the Iron Age, and comparisons with historically dated sites to the west led Ghirshman to suggest a date in the 12th or 11th century B.C. (1937:20-22). Although there was evidence of settlement, no coherent architectural remains were excavated. The tombs and their contents were quite different from earlier Bronze Age burials at sites in the Zagros (for example, Tepe Giyan), a fact that seemed to indicate that a significant change in cultural pattern had taken place in western Iran toward the end of the 2nd millennium B.C.

Twenty years later at Hasanlu,

excavations on the High Mound produced the first settlement remains associated with burnished pottery similar to that of Sialk Cemetery A. The Hasanlu vessels were colored black, light to dark grey, red or tan, depending upon firing conditions (Fig. 7). This ceramic tradition appeared in the Ushnu-Solduz valley during the second half of the 2nd millennium B.C. The preceding Bronze Age occupation (Hasanlu period VI), characterized by painted buff-colored pottery, appears to have come to an abrupt end. The succeeding occupation of Hasanlu period V represents not only a sudden change in pottery form and manufacturing technology, but also new burial rituals, new types of clothing and ornaments, and new architectural practices and building plans. These cultural patterns appear to evolve without interruption into those of the following period (Hasanlu IV), when iron had come into common use.

Hasanlu Period V: The Early Iron Age

The areas of the period V settlement that have been excavated on the High Mound at Hasanlu are limited, but the buildings that have been found illustrate certain architectural practices introduced at this time. Two small domestic buildings and one large public building have been identified (Fig. 2a, b). The locations of these functionally different structures set the pattern for the later, period IV settlement, with domestic buildings to the northwest and public buildings in the southern part of the High Mound.

The basic plan of the excavated period V domestic structure includes an anteroom with an adjacent stairway, a columned hall measuring 9 by 11 m, and a side storage room (Fig. 2a). This layout is repeated in the overlying buildings of period IV, such as Burned Building III and the larger, more elaborate Burned Building II (Fig. 6b). The partial remains of a larger period V structure with a buttressed facade was discovered beneath Burned Building I-East of period IVB (Fig. 2b; see also Dyson 1977). Interpreted as a public building, it shows that at least two organizational plans already existed in the early Iron Age settlement.

The Main Body of Iron Age Remains: Hasanlu IV

During the Iron Age, the main occupation at Hasanlu Tepe was on top of the High Mound, within an area approximately 200 m in diameter. Test excavations in the surrounding Lower Mound, about 600 m across, have found only one small building dated to Hasanlu IV. The latter, a small domestic structure with a courtyard, was called the "Artisan's House" because it contained molds, crucible fragments, and other artifacts used in bronze working (de Schauensee 1988). Other soundings in the

Lower Mound have encountered the remains of the Bronze Age settlement, which was considerably larger than Iron Age Hasanlu. Cut into these Bronze Age deposits were Iron Age cemeteries, the graves of the people of Hasanlu who died in the late 2nd and early 1st millennium (periods V and IVC-B; Fig. 3).

As we have noted, Hasanlu period IVB ended with a disastrous fire. This was the aftermath of a battle, graphically documented by abandoned weapons and human casualties. The IVB destruction has been placed at the end of the 9th century or the early 8th century by

a large series of radiocarbon dates (Dyson and Muscarella 1989). Inscriptions found in the Lake Urmia area raise the possibility that this event occurred when the Ushnu-Solduz valley was annexed by the Urartian kings Ishpuini and Menua around 800 B.C. in their drive to expand their political boundaries southward. Their chief opponents were the Assyrians located west of Hasanlu across the Zagros mountains (see Schneider, this issue).

In the light of this historical information, it is interesting to observe that during the 9th century, imported Assyrian artifacts and their imitations occur with some



3 Period IVB burial in the cemetery area of the Lower Mound accompanied by typical pottery offerings of the period. (Photo courtesy of the Hasanlu Project)

frequency at Hasanlu (see introduction, Marcus, Pigott, this issue). At the same time, a high level of prosperity was enjoyed, as evidenced by the presence of a great amount of metal, including gold, silver, antimony, bronze, and iron, as well as other precious materials such as amber, glass, and ivory (Fig. 8; see also Muscarella 1980). This wealth is associated with the presence of a powerful resident authority at Hasanlu, as indicated by the large volume of stone brought to the site for the foundations of large-scale brick buildings—an effort that required command of a considerable labor force.

The archaeological evidence from the Solduz valley as a whole suggests that during the Iron Age the ruling elite and those serving it lived in several lightly walled centers spread across the valley, each surrounded by good agricultural land. The bulk of the population, however, was dispersed. One small Hasanlu IV settlement has been discovered on a hillside; other small occupation sites may lie buried beneath the thick layer of alluvial soil that has accumulated in the valley during the past 3000 years (as was the case at Hajji Firuz Tepe; see Voigt 1983). It is also probable that a significant part of

the population contributing labor and perhaps other products to the local elite was not sedentary at all: part of the population may have lived in tents and moved seasonally with herds of domesticated animals. The existence of nomadic or semi-nomadic groups would explain the presence of Iron Age cemeteries on so many of the small mounds in the Ushnu-Solduz valley—ancient sites that were not occupied during this period. Since there are cemeteries attached to the larger settlements such as Hasanlu, the notion of a nonsedentary population to account for these small isolated cemeteries is particularly attractive.

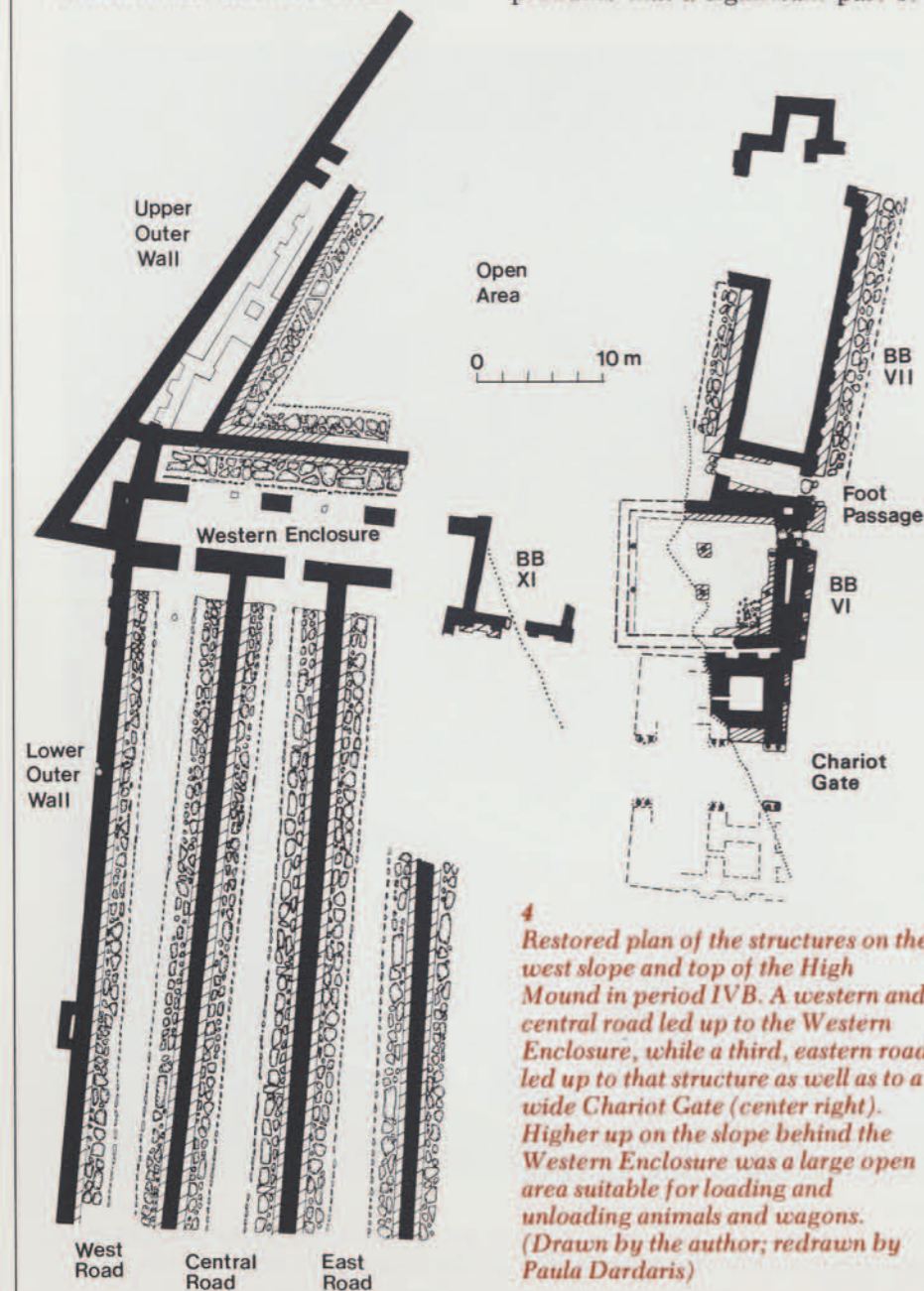
The Approach to the Hasanlu IV Buildings

During the late 8th and 7th century B.C. (Hasanlu period IIIB), the victorious Urartians built a massive defensive fortress on the High Mound, capable of holding the site as a fixed strongpoint on their southern frontier. This fortress indicates a major change in military strategy from the preceding period. During Hasanlu period IV the buildings on the High Mound were protected only by lightly built outer walls. Judging by the amount of equestrian equipment (see de Schauensee, this issue), mounted troops and chariots probably formed the main defense.

Evidence for the outer enclosure wall of Hasanlu period IV has been obliterated in most places by the subsequent construction of the Urartian wall. At present, the only architectural evidence for such an enclosure is a meter-wide wall running up the western slope of the High Mound to its crest, bordering the outermost road of the entry system, and extending on uphill (Fig. 4). We do not know the original height of this narrow wall, but masses of sheep and goat bones were dumped over it, suggesting that it may not have been very high.

Access to the settlement was controlled by a triple road system.

4 Restored plan of the structures on the west slope and top of the High Mound in period IVB. A western and central road led up to the Western Enclosure, while a third, eastern road led up to that structure as well as to a wide Chariot Gate (center right). Higher up on the slope behind the Western Enclosure was a large open area suitable for loading and unloading animals and wagons. (Drawn by the author; redrawn by Paula Dardaris)



Each of the three parallel roads had a hard-packed clay surface, flanked on each side by a stone drain, stone pavement, and clay "bench" built against walls that separated the roads and enclosed them (Figs. 4, 5). Thus traffic flowed in a straight line, with no movement between roadways except at their entrance and exit. The lower ends of the roads have long since been destroyed, so we have no knowledge of how they were entered from the plain. A much older but comparable triple road system at the 3rd millennium site of Altyn-Depe in Soviet Turkmenia had an elaborate gate system at its entrance (Masson 1988:Fig. 11). The existence of such an early structure in a geographical area that later shared cultural features with Iron Age Iran is intriguing, but of unknown significance.

The exits of the Hasanlu roadways into the enclosed summit of the High Mound are relatively well documented. The western and central roads each ended at an opening 1.5 m wide—just wide enough to admit a person or a large animal—into a rectangular court (Fig. 4). The court was backed by a shed-like construction supported along its front or southern side by a row of rectangular brick pillars and two wooden posts. We have called this court and shed the "Western Enclosure." The upper end of the third, eastern road has not been excavated, and we cannot be sure about the way in which it joined with the Western Enclosure. Projecting the known line of this roadway, however, places it opposite a 4-meter-wide opening at the eastern end of the Western Enclosure that gives access to an open area further up the slope. This opening is wide enough to allow chariots or wagons to pass on uphill to the open assembly area beyond. Accepting this reconstruction, we may speculate that the western and central roads were for everyday foot traffic, including people, pack animals, and perhaps ridden horses, while the eastern road was left free of such traffic so as to allow military horsemen, officials, and chariots to quickly move out onto the plain, where defensive actions

could be undertaken when needed. A strategy relying on pitched battles outside the town might also explain why so few soldiers and equipment were found slain within the settlement at the time of its destruction (see Muscarella, this issue).

A road system apparently built to facilitate the movement of equestrian troops and chariots during Hasanlu period IV raises an interesting question. Cavalry was first added to the Assyrian army during the 9th century, in the reign of King Assurnasirpal II (883-859 B.C.). The Hasanlu IV road system was constructed before this time, in period IVC. Was the adoption of cavalry by the Assyrians perhaps inspired by military practices in northwest Iran?

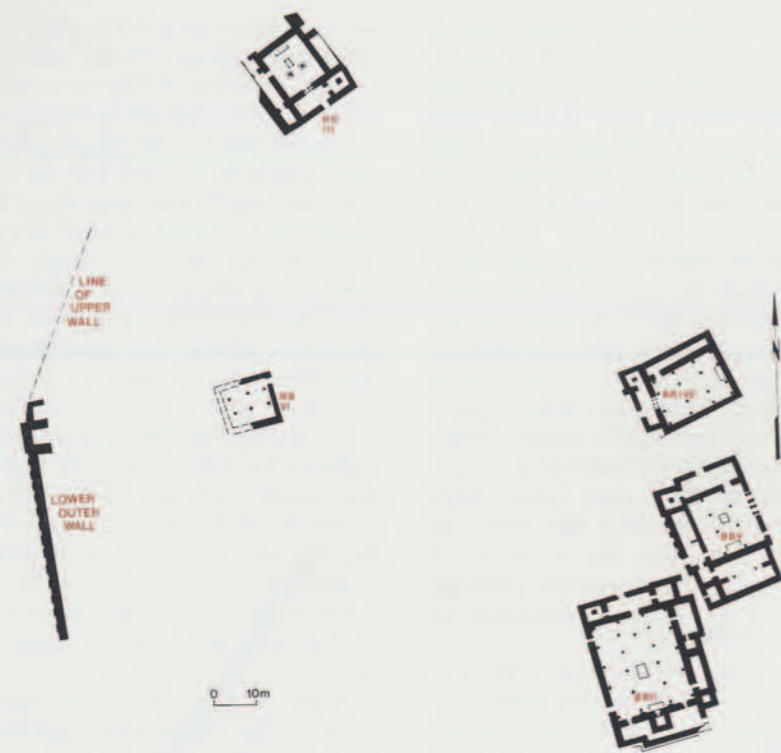
To the east of the road system at the top of the mound lay a series of buildings running along a north-south line. At the beginning of period IV (IVC), this line was discontinuous. A single large structure, Burned Building VI, stood just to the east of the roadway exits, with its entrance facing east toward a

broad open area (Fig. 4). This structure had one room with two rows of three columns; benches lined the three preserved walls and probably the fourth (destroyed by the foundation trench for the later Urartian wall). Lying at some distance to the northeast of Burned Building VI stood a large residential structure, Burned Building III, which also faced into the central open area at this time. Burned Building III consisted of a large hall (9 by 11 m) with two columns, a kitchen and storerooms along the sides and back of this hall, and an anteroom; a stairway led from the anteroom to the second floor (Fig. 6a). In the columned hall was a central hearth aligned with the doorway and a platform at the rear of the room, and benches lining the walls.

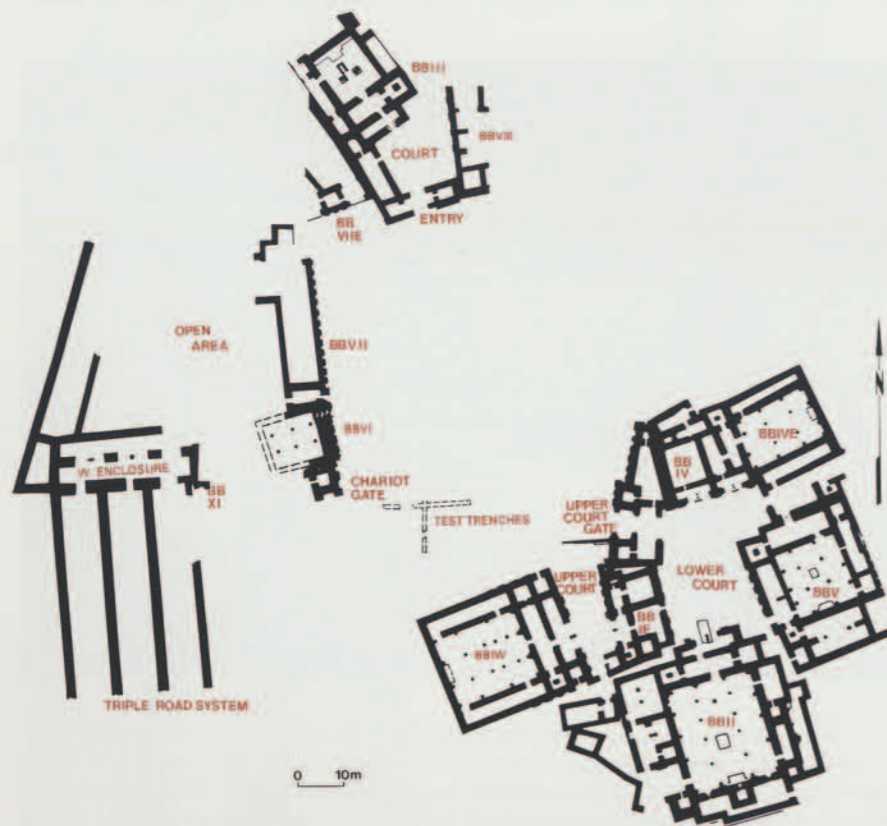
After a fire, which damaged some of the period IVC buildings, new structures were erected along a line drawn between Burned Buildings III and VI and extending to the south (Fig. 6b). These new period IVB buildings effectively formed a barrier between the road-



5 A view looking downhill shows a well-preserved section of the period IVB western road. At the left stands a clay bench, stone pavement, stone drain, and hard-packed clay road surface. Part of the parallel stone drain may be seen at the upper right. The wall against which the bench stood has been robbed out at this point, but is preserved higher up the slope. The pavement was interrupted in this area by widely spaced projections across it, as seen in the center. (Photo courtesy of the Hasanlu Project)



6a General plan of the period IVC structures on the High Mound. (Drawn by the author; redrawn by Paula Dardaris)



6b General plan of the period IVB structures on the High Mound.

ways on the west and the open unbuilt area to the east. Starting at the northern end of this line, Burned Building III was enlarged by the addition of a portico, kitchen rooms, and an enclosed courtyard and gate. Set between the northeast corner of Burned Building VII and the southwest corner of Burned Building III was a double gateway.

Burned Building VII was a long, narrow corridor building, with a stairway at its northern end. A foot passage through its southern end led from the eastern roadway to an open area of the settlement (Fig. 4). Although the northern end of Burned Building VII had been badly disturbed in later periods, the evidence suggests that there may have been a 4-meter-wide entrance from the west—an open area that could have been used for the marshalling of troops and chariots.

The broad entrance hypothesized for Burned Building VII, suitable for chariots, suggests that we may be looking at a 9th century garage—a storage area for chariots adjacent to an assembly area, and in close proximity to the road system. If stables for horses were also in this area, they could have been located in the triangular area between the outer wall, Burned Building VII, and Burned Building III (Fig. 6b). A double gate between Buildings III and VII suggests that there was significant traffic between this relatively small triangle and the central open area to the east. If stables were ruled out, one might suggest that a barracks was located here. Unfortunately, the period IV remains were totally destroyed by later construction, so that the use of this area will remain an open question.

Just to the south of Burned Building VI was another broad gate with a 4-meter-wide passage presumably for chariots (Fig. 6b). This had buttressed facades in Assyrian style. When the gate was built, the eastern roadway must have been altered so that chariots could turn and pass through the gate into the central area. This change is only partially documented, however, since the area where the road must have turned has not been completely excavated



7 The pottery of Hasanlu IV occurs in a variety of shapes, some demonstrably derived from metal prototypes. The same clay was fired tan, red, gray, or black, depending on kiln conditions. While the inhabitants of Hasanlu tended to favor burnished black or gray vessels, the inhabitants of Dinkha Tepe, 17 miles away, produced the same shapes but preferred red. (Clockwise from upper left: UM 65-31-27, H. 18.5 cm; UM 59-4-20, H. 14.0 cm; UM 63-5-117, H. 18.0 cm; UM 63-5-129, H. ca. 12.0 cm; UM 71-23-375, W. 14.2 cm; UM 60-20-86, H. 15.5 cm. Photo by Fred Schoch, courtesy of the Hasanlu Project)

The new Chariot Gate stood directly opposite another equally wide gate that led into the Lower Court with its major buildings (see below). The open area between the gates had a hard-packed gravel surface, as determined through test excavations.

The Arrangement of Major Buildings and Courts

The most important of the excavated Iron Age buildings lie on the southern half of the High Mound. The three oldest, initially constructed in period IVC, are Burned Buildings II, IV-East, and V (Fig. 6a). At the present state of analysis, it is not possible to determine their order of construction, but there are some clues to be drawn from their relative position and orientation. Thus it might be argued that Burned Building IV-East was built after Burned Building V, since it seems unlikely that as special a building as V (see below) would have been sited so that it faced the blank wall of another structure at a time when there was no need for crowding.



8 A mosaic glass beaker imported from Mesopotamia made of pieces of glass cut and fitted over a core and fused by heat. Details were added by etching with a sharp wheel and drilling holes into which colored glass rods were placed. The original ground color was red but has turned green. This lower register of the vessel shows a sacred plant emblem flanked by kneeling goats. Mosaic glass vessels originated in Mesopotamia around 1500 B.C. and may have been made as late as the 7th century B.C. in Assyria. (UM 65-31-403, est. Ht. 12.0 cm. Photo courtesy of the Hasanlu Project)

All three buildings were burned at the end of period IVC and were then extensively reconstructed at the start of period IVB. In this process the damaged brick walls were torn down to a course just above their free-standing stone foundations and re-erected; stairways were rebuilt with salvaged, partly burned bricks, often laid with the burned side down. To strengthen the structure, additional columns that were out of alignment with the formal plan were installed (as, for example, in Burned Buildings IV-East and V), and new floors were laid. Existing doorways and openings were narrowed or completely blocked, and new ones were cut through walls (as in Burned Buildings IV-East and V; Fig. 11). Such alterations clearly indicate changes in building function.

Prior to the period IVB reconstruction, the southern buildings had been free-standing, independent units. This "open plan" was now given up in favor of a plan with controlled access to courtyards and buildings, repeating a pattern of change already observed near the eastern road system (Figs. 4, 6). This change can be clearly seen in the area surrounding the stone-paved Lower Court (Fig. 6).

Starting at the northeast, Burned Building IV-East, originally entered from the west, was reoriented toward Burned Building II and the Court by a south-facing portico placed at the southern end of its western side (see below). To the southeast, the space between the south wall of Burned Building IV-East and Burned Building V was filled with a two-storied structure (Burned Building IV-V) with its own stairway. This new building served as a passage into the Lower Court from the east, an area that remains unexcavated. Structurally, Burned Building IV-V also became a second anteroom for Burned Building V, reorienting the main entrance of the latter toward the Lower Court. A second, more direct entrance from Burned Building V to the Court was provided by a small door, secondarily cut through the south end of the western (side) wall. The facade of the west wall to the north of this door was ornamented



9 A view of the fire altar(?), column bases, bench, and paved area (in the northwest corner, upper left) of the columned hall of Burned Building V, as it was in 1972. Fired and plastered superimposed surfaces stood at the lower left side of the altar. Note the brick paved floor at the center right. (Photo courtesy of the Hasanlu Project)

with pilasters, perhaps added during the rebuilding.

Burned Building II, with an added portico, formed the south side and focal point of the Lower Court. To the right of the entrance of Burned Building II, along the western side of the court, was an entirely new complex: Burned Buildings I-East and I-West were built on slightly higher ground (formed by earlier structures that had been demolished). The eastern facade of Burned Building I-East had small buttresses mirroring those on the west wall of Burned Building V, immediately across the Court. The Court itself was closed in by an elaborate gate at its northwest corner, filling the space between the eastern facade of Burned Building I-East and Burned Building IV. The outer wall of this Lower Court Gate building, which faced the open area to the north, was also ornamented with small brick buttresses.

The restricted entrance to the Lower Court contrasts with what appears to be a wide entrance to the

small Upper Court. An 11-meter-wide staircase formed by long, natural stone slabs led up from the open area into the Upper Court. This staircase undoubtedly had some sort of entry structure, since there were two massive stones still in place at the sides of this area; however, most of the evidence has been lost to later disturbances, so that, when found, the stairway lay just below the modern surface of the site.

The Upper Court was flanked by Burned Buildings I-East and I-West, with facing porticos. Adding to the symmetrical appearance and enhancing the approach to the entrance of these buildings were small buttresses ranged along the opposed eastern and western facades, between the porticos and the stairway. The southern facade of Burned Building I-West also was decorated with evenly spaced buttresses; almost certainly these were repeated on the northern facade, but the evidence is inconclusive due to poor preservation of the north wall.

Building Plans and Alterations

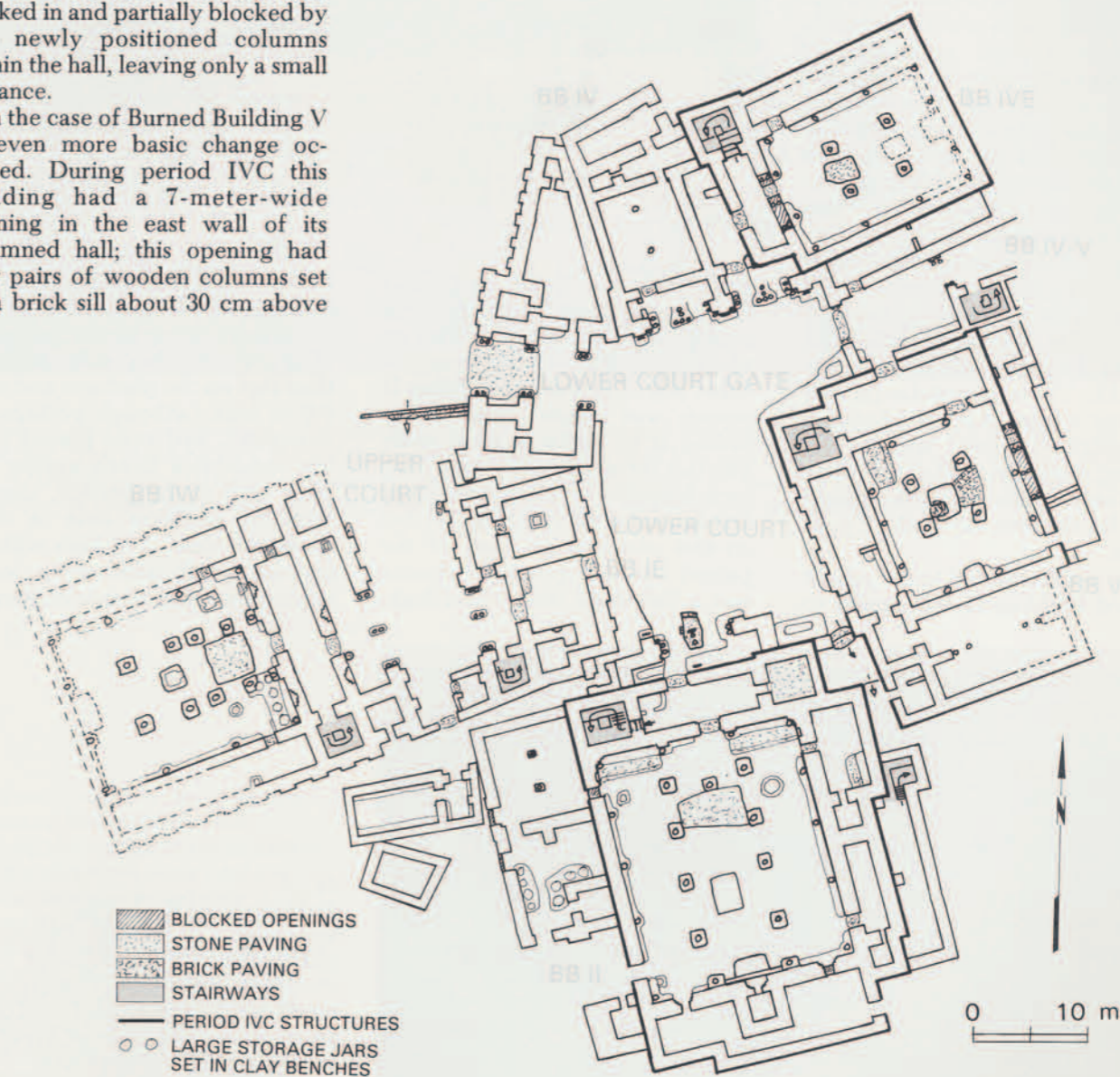
While each of the larger buildings surrounding the Lower Court during Hasanlu IV incorporated a basic plan, with central hall, anteroom, and stairway, the details of each building varied. In the earlier IVC phase, for example, Burned Building IV-East had a 5-meter-wide internal doorway made with three pairs of wooden columns, joining the western anteroom to the central columned hall (Fig. 11). When this structure was rebuilt in period IVB, the doorway was bricked in and partially blocked by two newly positioned columns within the hall, leaving only a small entrance.

In the case of Burned Building V an even more basic change occurred. During period IVC this building had a 7-meter-wide opening in the east wall of its columned hall; this opening had four pairs of wooden columns set on a brick sill about 30 cm above

floor level (Fig. 6a). What this opening faced to the east we do not know, since later (period IVB) construction filled in that area; but looking through the opening into the central hall during period IVC, one would have seen what appears to have been a central altar (Fig. 9). The altar was a brick block on which stood a tall pinnacle, the latter formed by the accumulation of more than a hundred distinct layers of burned plaster. These layers indicate a repeated process of burning and replastering.

The altar itself stood in the center

of the columned hall. It was aligned not only with the eastern opening, but also with the primary north-south axis of the building, set between two rows of wooden columns and lined up with a low platform set against the south wall of the room. During the period IVB rebuilding, the eastern opening was almost entirely bricked up, leaving only a small doorway at its north end. Additional wooden columns were placed asymmetrically along the eastern and western sides of the hall, apparently added to strengthen the structure (Fig. 10). With the



10 General plan of the main group of buildings showing their organization around the Upper and Lower Courts and the similarity of the basic plans. (Drawn by the author)

eastern opening blocked, the room was completely reoriented to its north-south axis. Clearly the original function of the room had been given up, a change that is confirmed by the condition of the room and its contents at the time of the period IVB fire (see below).

Another important change made in period IVB was the addition of an exterior portico to Burned Building II, and to Burned Buildings IV and IV-East (as well as to Burned Building III in the northwest). The new double portico of Burned Building IV and IV-East formed a unified facade at the north end of the Lower Court, facing Burned Building II. Each portico had three pairs of wooden columns that helped to support the floor and facade of a second floor room or porch. Additional columns flanked these pairs at the front of both porticos, providing additional support for the superstructure and helping to enhance the openings (Fig. 10). Undecorated stone stelae, over 4.5 m in height and set into prepared sockets, stood against the front wall of the double portico and against the party wall in the center (Fig. 12). These three stelae (as well as those in front of Burned Building II, described below) were of unshaped, naturally bedded limestone from nearby hills, the same material used for the stairway to the Upper Court.

The portico added to the rebuilt Burned Building II was similar to



11 View of the doorway leading from the anteroom into the columned hall (foreground) of Burned Building IV-East. In period IVC the doorway was a wide opening with three pairs of wooden columns supporting the lintel. In period IVB the doorway was filled with brick, enclosing the columns and leaving only a small opening. Two additional columns set in the hall also partly blocked the opening.

those of Burned Buildings IV and IV-East. It was also made of three pairs of wooden columns with an additional column at the front on either side. The Burned Building II portico was unique, however, in having at its center a great stone slab that formed a meter-high platform mounted by small stone steps in front and at the side (Fig. 14). Set on this platform in front of the paired wooden portico columns was a limestone stele 1.5 m high,

found standing erect; lying flat before the stele was a smooth, waterworn slab of bluish-grey stone (Fig. 14). Another stele, broader than that on the platform and only 0.9 m high (although perhaps incomplete), had been placed on a low mud-brick bench against the back wall of the portico, aligned with the platform stele. A third limestone stele, 3 m high with an asymmetrically pointed top, stood against the outer facade of Burned

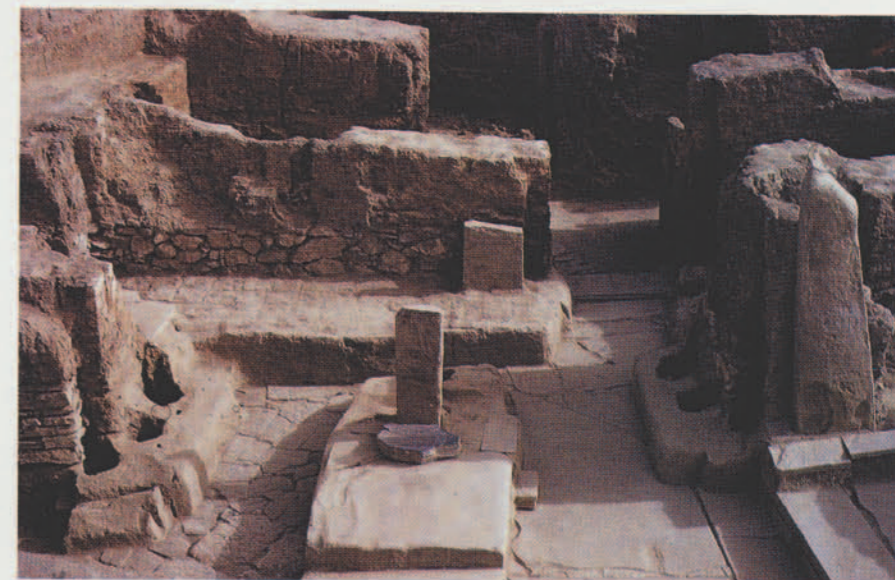


12 Twin porticoes flanked by undecorated stone stelae at the north end of the Lower Court (paved area). Gateway into the Court is at center left. Note the round holes left by the burned-out columns. Fresh mud plaster is being applied to protect the ruins. The stele at the right measures 4.5 m in height. (Photo courtesy of the Hasanlu Project)



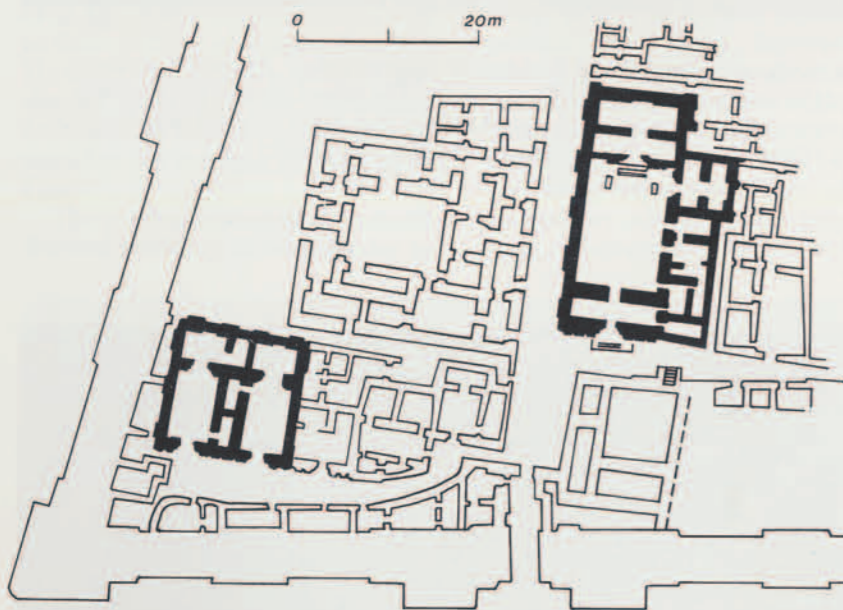
13 Air view of the 1972 excavations at Hasanlu showing the temple (Burned Building II, upper center), Burned Buildings I-East and -West (center right), Burned Buildings IV (lower center) and V (lower left). The later Urartian fortification wall of Hasanlu period IIIB curves around the center and upper edge of the picture. Pits dug in period IIIB may be seen on surfaces in excavated squares in the lower left. (Photo by Julian Whittelsey for the Hasanlu Project)

14 Fully excavated and cleaned portico of Burned Building II in 1960, showing the central platform with its bluish water-worn stone sitting in front of an undecorated stele. A second stele stands on the brick bench behind and a taller stele stands against the front wall at the right. Note the burned holes at right and left showing the positions of the round columns which once supported the facade. The door at the back led into the anteroom; the columned hall beyond had not yet been excavated. (Photo courtesy of the Hasanlu Project)





15
The south end of the columned hall of Burned Building II showing the raised hearth (altar?) on the central axis of the hall and the platform and stepped-recessed doorway in front of the cella(?) at the far end. Stone and mud plaster footing for columns may be seen to the left and right of the rear platform and just right of the southwest corner of the hearth. (Photo courtesy of the Hasanlu Project)



16
Plan of Temple A and Subsidiary Shrine C at Tell Harmal, Iraq, dating to the Old Babylonian period, ca. 1800 B.C. These buildings, in contrast to the secular buildings around them, utilize small buttresses on exterior walls and framed doorways with stepped recesses as entrances to the buildings themselves and to the cellas at the rear of each structure. A similar doorway leads to the right into an auxiliary shrine in Temple A. These architectural elements used in this way characterize religious structures throughout Mesopotamian history. (Drawn by Paula Dardaris, after Oates 1986)

Building II on the west side of the portico, facing those of Burned Buildings IV and IV-East across the court.

Using only the architectural evidence, we can suggest a general function for the buildings surrounding the Lower Court during Hasanlu IVB. The area is characterized by restricted access, the use of buttressed facades at the gate and on both sides of the Court, the use of stelae at either end of the Court, and the presence of the altar-like stone platform in front of the major building (BBII). All of these attributes strongly suggest that we are looking at a religious precinct, and that Burned Building II is probably the focal point of religious activity.

This conclusion is supported by comparisons of Burned Building II with historically documented temples in Urartu and Mesopotamia. In Urartu, stelae in sockets were placed in an open air shrine at the site of Altin Tepe (central Anatolia), analogous to the Lower Court at Hasanlu (Forbes 1983:Fig. 44). Rows of stelae, some of rough, unworked stone, stood in an open-air area at the Assyrian capital of Assur; the tallest of these was 4.47 m high. These stelae belonged to kings and officials, and, as shown by those that were inscribed, represented a span of 700 years, from the mid-2nd millennium to the 8th century B.C. (Canby 1976). These stelae may be related to similar clusters of stelae in Syria and the Levant, but their significance remains conjectural.

Two related architectural features of Burned Building II are also found in Mesopotamian temples: a raised brick hearth (an altar?) on the central axis of the building, and a small room at the back end of the large hall (also on the central axis), entered by a doorway framed by stepped recesses (Fig. 15). In Mesopotamia, niched doorways were exclusively associated with temples or royal chapels (Fig. 16), and the small room at the rear of a temple served as a "cella," the chamber in which the deity resided (Frankfort 1955; Oppenheim 1964). The contents of Burned Building II are equally compatible with its identification as a temple (see below).

The Upper Court with its flanking buildings appears to have been a wholly new installation built in period IVB (Fig. 10). The porticos of both Burned Buildings I-East and -West, as well as the flanking buttressed facades (features added onto the older buildings), formed part of the initial plan. The size of rooms and the layout of Burned Building I-East indicate that it was a service building, while the layout of Burned Building I-West repeats the large formal columned hall system seen in other buildings. The use of stepped niches in the anteroom and in the columned hall is a special feature of Burned Building I-West; also unique is a paved "seat" in a bench facing the fireplace in the northeast corner of the columned hall.

These two buildings (I-West and I-East) are characterized by relatively easy access, especially when compared with the Lower Court and its structures. The entrance to the Upper Court leads from an open area to the north and is made inviting by its width and the broad

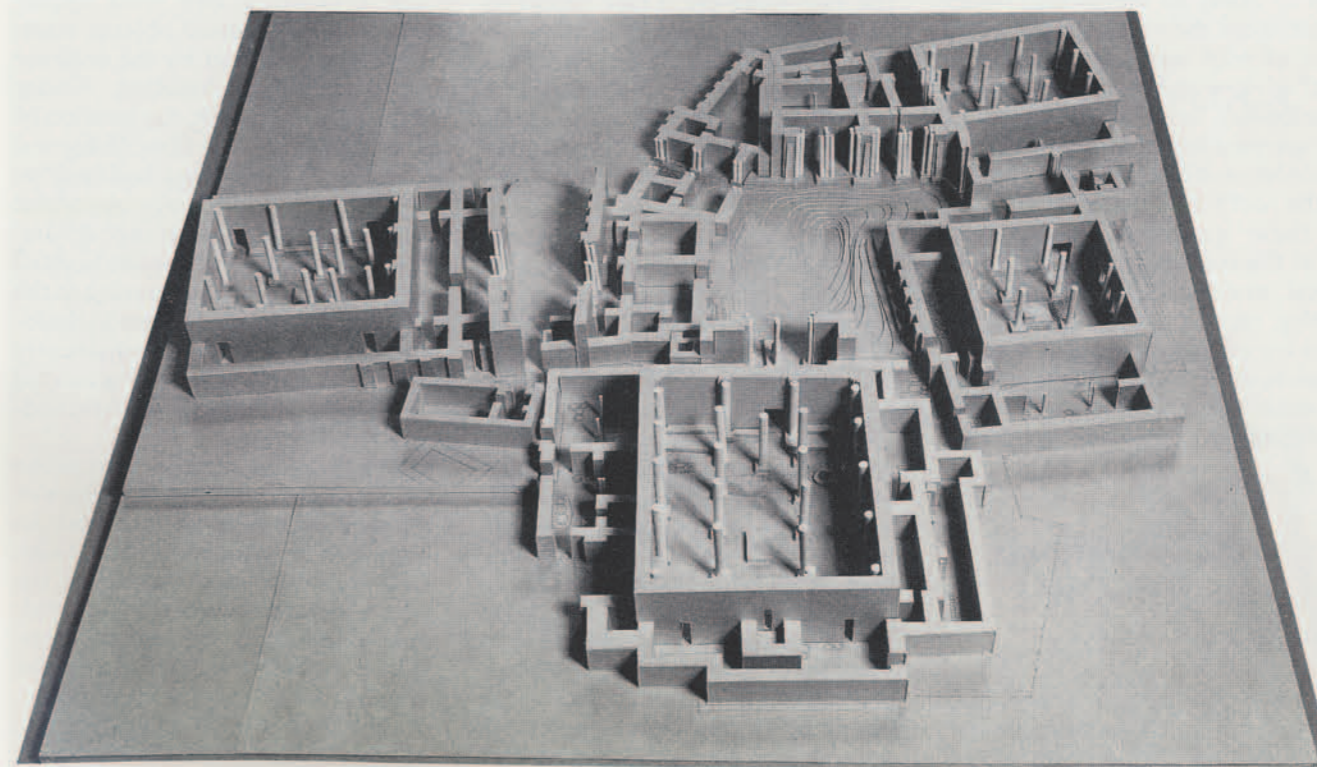
stairs that lead up to the adjacent buildings. From the Upper Court one has access both to the Lower Court (by means of a door in Burned Building I-East) and to smaller buildings lying to the south through a door at the south end of the court. These architectural attributes suggest that the Upper Court buildings served a more public purpose than those of the Lower Court. Burned Building I-West may well have functioned as the seat of secular power within the community of Hasanlu IVB. Although few artifacts were preserved within this building, they are compatible with this hypothesis based on plan and architectural decoration (see below).

Upper Stories

As part of its basic layout, each of the major Iron Age buildings at Hasanlu included a spiral stairway leading to a second story or to the roof (Fig. 10). The stairs were all built around a central column of

brick set on a free-standing stone foundation. The lower part of the stairway was of solid brick; the upper part was supported by corbeled vaulted brickwork, as evidenced by the stairway in Burned Building IV-V, which was preserved almost to the second floor level. Exactly the same structure with comparable dimensions may be seen today in stairways in Malayan village in southwestern Iran. Nine such stairways have now been found at Hasanlu, dating to periods V and IV.

The presence of these staircases, combined with the height of fallen brick walls and concentrations of artifacts lying over fallen ceiling remains, raises questions about the nature of the second floor plan of these buildings and of the function of rooms on the upper floor level. To assist us in thinking about these problems, Thomas Applequist, one of the Hasanlu Project architects, built a model of the southern complex (Fig. 17). This model is based on the available evidence, conservatively interpreted. For example, the



17
Model of the main building complex excavated for period IVB looking across Burned Building II (center front) toward the double portico and stelae of Burned Building IV-IV East. Building V is at center right and Burned Building I-West at center left. (Model by Thomas Applequist for the Hasanlu Project)

excavated evidence indicated a minimum height of 7 m for the side walls of the columned hall in Burned Building II, but other buildings may have been lower. In the model Applequist has made all of the columned halls this same height, recognizing that in reality they probably varied.

Each wall consisted of a free-standing, uncut stone foundation 1 m high, supporting a sun-dried brick superstructure that was preserved an additional 2 m in some areas. From the basic plan it is possible to build up the first story of the model. The placement of the columns in the model is especially useful in considering changes in structure due to the remodeling after the first fire (end of period IVC). Even so, a series of questions arise that are not easily answered. For example, what was the height of the paired columns in the porticos? Were they a monumental two stories in height, or were they a single story with a lintel across? If the latter, was the upper facade an open balcony, a solid wall, or a wall with windows? What was the location of doors on the second floor? What were the room plans? What kind of roof was used, gabled or flat? If it was flat, what was the relationship between the height of the surrounding rooms and that of the columned hall? Was there access to the roof? The choice of answers to these questions dramatically alters the appearance and the functional understanding of any resulting reconstruction, as may be seen by efforts applied at various times to other ancient buildings, for example those at Persepolis in the south of Iran (Trümpelmann 1988).

Artifact Distributions as Clues to Building Function

Architectural evidence, including the model, has provided some hypotheses and a set of questions about the way in which the Hasanlu IV buildings were used. These ideas must ultimately be viewed against other kinds of evidence to provide

confirmation and perhaps a new set of questions and answers. We realized when first considering the question of building function that important information was to be found in the stratigraphic context and distribution patterns of artifacts within the ruined structures. Initially, stratigraphic evidence allowed us to separate artifacts found lying on the ground floor from those lying in the collapsed second floor debris. At my request, the Hasanlu registrar, Mary Virginia Harris, began plotting artifacts on two plans of the southern buildings, one for each floor level. During this process, patterns in the distribution of materials and artifact types, as well as distinctive artifact clusters, began to emerge. The distributions completed, it is now possible to say a good deal about the differences between first and second floor levels in each building, and about differences in the use of individual rooms and buildings.

As an example of this approach, let us examine the distribution of selected ornamental items in Burned Building II (Fig. 18a, b). On the first floor are a few pieces of ivory inlay, charred pieces of shaped wood, copper furniture attachments, a tall iron lamp with tripod feet, and red deer skulls complete with antlers. The wooden items included inlaid plank fragments and lathe-turned legs from a piece of furniture; some of the inlays and copper attachments also probably came from other pieces of furniture used in the columned hall. Two ivory inlays in the shape of eyes had a very different function, and may provide an additional key for the interpretation of the room and its contents: using texts from Mesopotamia, these inlays may be interpreted as the eyes of a cult figure, a deity who resided in Burned Building II (Fig. 20).

Ornamental artifacts from the second floor collapse included a great many glazed wall tiles, a large quantity of ivory inlay and fragments of wooden inlay preserved by charring, and other wood and ivory fragments. From this second floor distribution we conclude that decorative wall tiles, additional pieces of furniture, small ivory

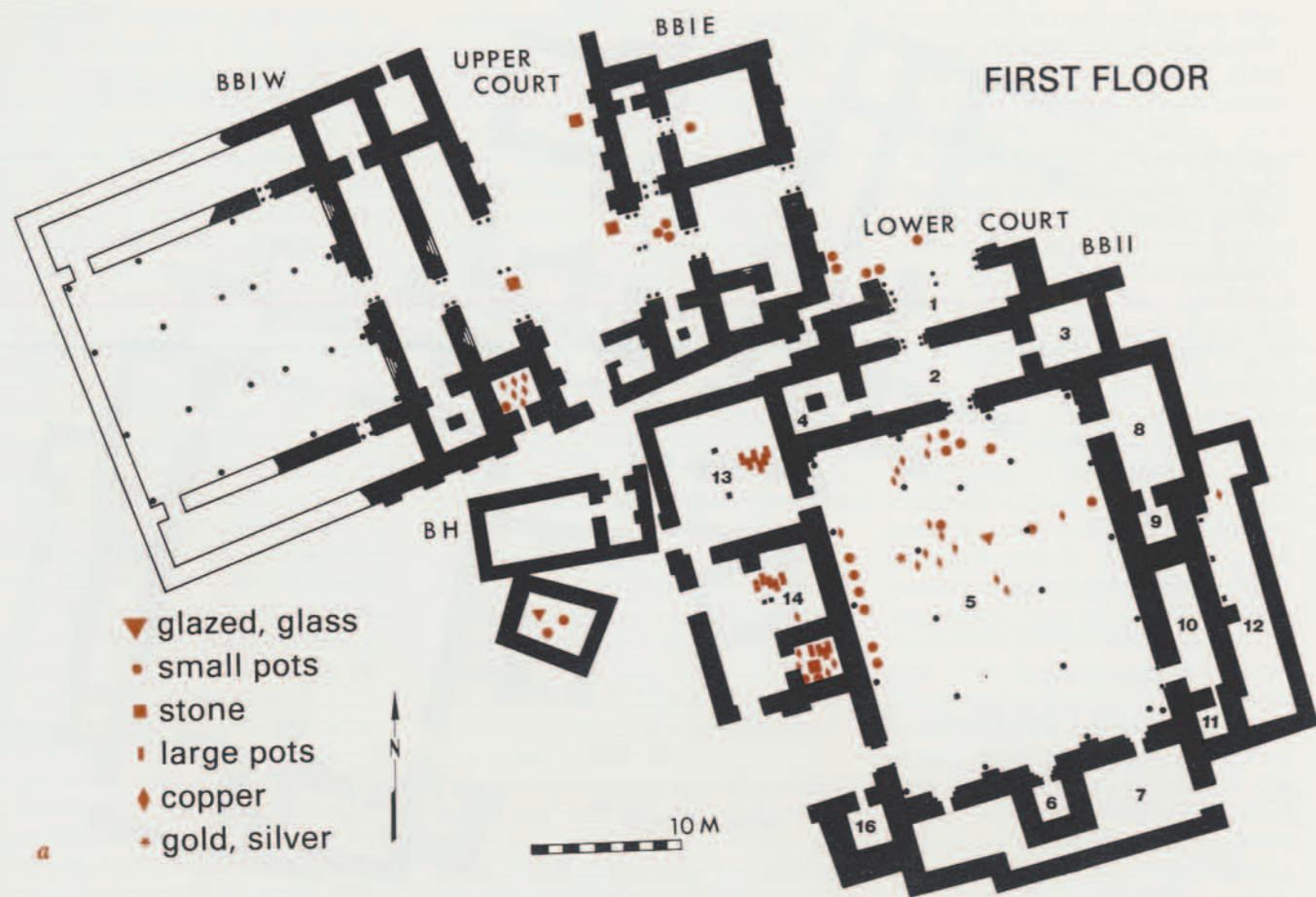
boxes, and wood and ivory statuettes were stored on the south-eastern and eastern second floor side of the building (above rooms 10, 11, and 6).

Another pattern is provided by small- and medium-sized containers made of copper, plain or glazed pottery, and large storage jars or pithoi. The latter, not surprisingly, are all confined to the first floor level and to storerooms along the western side of Burned Building II (rooms 13, 14; Fig. 19a, b). Smaller vessels in a variety of materials appear to have been stored in a small room on the west side of the building (room 15), and small ceramic pots were also found in rooms 8 and 9. A line of small pottery vessels in the columned hall suggests storage on a shelf or along the bench on the west side of the hall. The location of other containers on the first floor corresponds to the general location of bodies of men, women, and children crowded at the north end of the room. Unlike victims found elsewhere on the High Mound, these people were all wearing clothing and ornaments, and were apparently carrying small objects when they were crushed by the collapse of the burning building. Under these circumstances, the location of artifacts on the first floor of Burned Building II (and other buildings as well) may not always represent original patterns of storage or use. The same comment applies to small artifacts found on the paving in the Lower Court outside Burned Building II, which were apparently dropped as they were being carried during the sacking of the surrounding buildings.

When we turn to the distribution of containers on the second floor of Burned Building II, we find an interesting contrast to the first floor. We may first note that all of the stone containers found in this building come from the second floor. These include a vessel bearing the name of a Kassite king, Kadashman-Enlil (Pigott, Fig. 16, this issue); two kings of this name ruled in southern Mesopotamia, dating the container between ca. 1360 and 1255 B.C. This fragment, along with several other objects dated to the late 2nd



18a,b
Contrasting patterns of distribution of ornaments found on the floor (a) and in the second story collapse (b) of Burned Building II. (Drawn by the author; redrawn by Denise L. Hoffman)

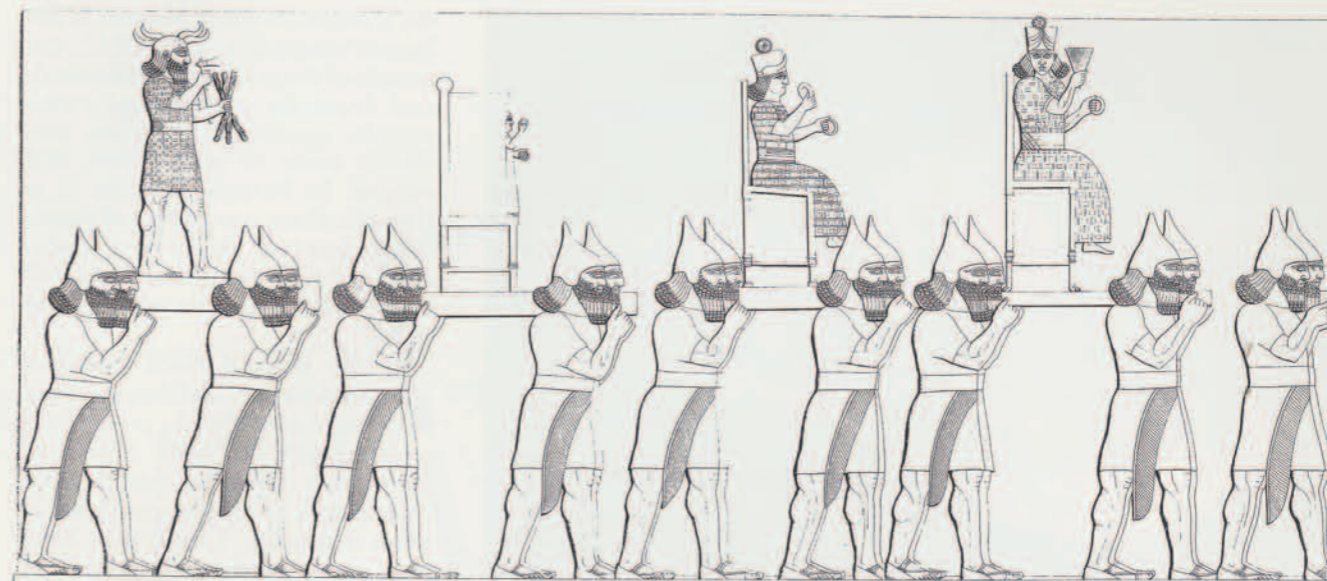


a



b

19a, b
Contrasting patterns of distribution of containers found on the floor (a) and in the second story collapse (b) of Burned Buildings I and II. (Drawn by the author; redrawn by Denise L. Hoffman)



20

According to Mesopotamian custom, the gods of a defeated city were taken captive by the victors. A relief from the palace of King Tiglath-pileser III (744-727 B.C.) at Nimrud shows Assyrian troops carrying four cult statues. The two seated female figures and the small figure in the box have not been identified, but the standing male figure is the storm god Tešub, based on his horned headpiece and the trident and axe that he carries. (Barnett and Falkner 1962; original illustration from Layard 1849)

millennium, may have arrived at the site in period V, and if so, would represent heirlooms already several centuries old at the time of their accidental burial at the end of the 9th century (Fig. 21). The existence of such heirlooms is demonstrated by the presence of two stone maceheads belonging to the King of Susa, Tan-Ruhurater, who ruled ca. 2100 B.C. Given the evidence of cultural continuity between periods V and IV, and given the history of deposits at other religious centers in the ancient Near East, it is possible that such objects arrived at the site long before the 9th century. Alternatively, it is also possible that these

objects were already old when they arrived at Hasanlu. Such old objects, given to the Hasanlu temple by the Assyrians, would have reflected a high regard for their provincial friends or allies; in Assyria such items were valued antiques, linked to ancient rulers and deities.

Small glazed containers were concentrated in the same area as the glazed wall tiles with which they were apparently stored (see Dyson, "Rediscovering Hasanlu," Fig. 10a,b). The near absence of glazed objects elsewhere at the site and the storage of these objects with other luxury goods in Burned Building II

indicate the relative value of glazed pottery at this time at Hasanlu. Metal containers were also found in fair number on the second floor, toward the front of the building above the northeastern storerooms (rooms 9, 8). A beautiful lion-shaped censer, made of a glass compound known as Egyptian blue and covered with gold leaf, had fallen into the west end of the anteroom (Fig. 22).

The distribution of containers in Burned Building I-West is quite different from that in Burned Building II. The contents of the first floor of this building are not well known, due to earth removal toward the



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Stone bowl inscribed in cuneiform found fallen into room 7 at the southeast corner of Burned Building II along with the fragment shown in Pigott, Fig. 16, and 15 stone maceheads. Three of these latter were inscribed, two with the name Tan-Ruhurater, who was king of Susa, the capital of Elam, around 2100 B.C. A third belonged to someone named Sin.... Also found in Burned Building II in a small storeroom on the west side was half a carnelian bead dedicated "to the goddess Baba...sister...presented." Baba was the consort of the god Ningirsu at Lagash in Babylonia. The stone bowl is inscribed "Palace of Bauri [or Qauri], king of the country Idi; to the sun god Ušiši." One may wonder whether depositing an object dedicated to the sun god has any significance for the identification of the deity housed in Burned Building II. (Photo courtesy of the Hasanlu Project)



22
Lion censer of Egyptian blue and gold foil found in Burned Building II. The censer is a small bowl clasped in the paws of a lion and resting on an open hand. Such censers were used in Mesopotamia and Egypt to make offerings to the gods. (HAS 60-520, W. 14.0 cm, Musée Iran Bastan, Tehran. Photo courtesy of the Hasanlu Project)

back of the building (its western end) during the construction of the Urartian wall. It is also possible that some looting of the first floor had already taken place at the time of the fire. Many small burnished black pottery saucers were found in a small room entered from an alley (room 6) that was also full of rich black soil. By contrast, in the eastern end of the building the contents of second floor rooms were preserved, a circumstance that allows us to document the contents of the rooms over the anterom (room 2) and possibly the portico (room 1). Here were masses of small ceramic pots, as well as stone and metal containers, including the Hasanlu Silver Beaker (above room 2) and the Gold Bowl (above room 6; see Winter, this issue).

The great quantity of artifacts on the second floor in both Burned Buildings I-West and II, as well as the presence of exotic materials and unique types, would seem to indicate that these upper rooms functioned as "treasuries," used for storage rather than as living quarters. By contrast, the widely dispersed occurrence of small numbers of metal and stone vessels within

the second floor collapse of Burned Building IV appears to reflect the use of this space as a living area.

Another category of artifacts, weapons, provides a pattern of some interest. Figures 23a and 23b show the distribution of weapons in Burned Building II, including arrowheads, blades, maceheads, spearheads, and armor. Within the columned hall on the first floor, the distribution corresponds primarily to the location of a group of individuals lying at the north end of the room, who were presumably wearing or carrying these items. The location at the time of the building's collapse does not, therefore, represent the location of these weapons in the building during normal use.

On the other hand, the occurrence of larger numbers of weapons such as maceheads and spears in first floor storerooms seems quite purposeful (rooms 13, 14, 10). Weapons were also stored on the second floor of Burned Building II, in the same rooms as more precious items. Although the presence of weapons in a temple treasury may seem odd, it is documented in an Assyrian account of King Sargon's defeat of

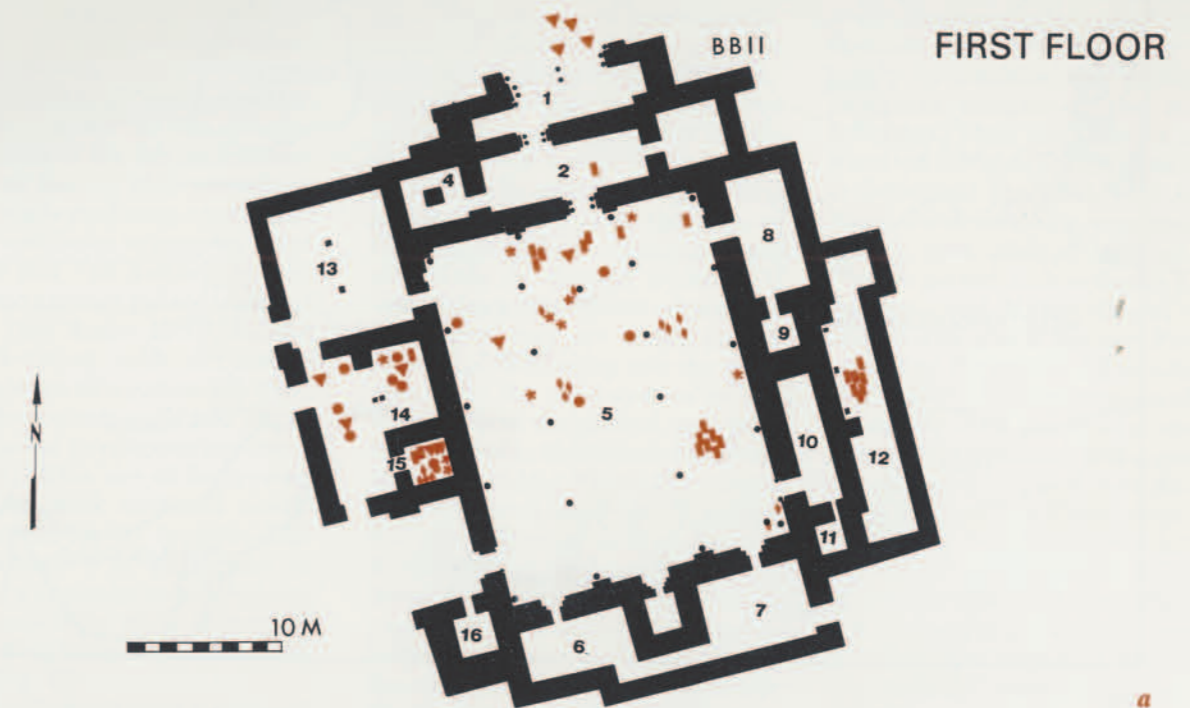
the Urartian town of Musasir in the Zagros mountains. In 714 B.C., the temple of the god Haldi was seized, and from its storerooms came swords, spearheads, javelins, and shields made of gold, silver, and copper. In Burned Building II at Hasanlu, there was a mass of maceheads located above the southeastern storeroom (room 7), as well as others above the east rooms (8-11).

In the second floor collapse within the portico and the anterom were more arrowheads, perhaps associated with the battle. A mass of spearheads collapsed into the east central area of the columned hall is more enigmatic. Could they have been stock-piled on the roof? In that case, it must have been flat. Were they on the second floor over the western storerooms and thrown down when the west wall of the columned hall collapsed eastward? Or were they actually stored in the hall? At present, pending a more detailed study of the collapse of the structure, we are unsure. We know only that they rested above the fallen columns, which were covered with the brick rubble of the collapsed western wall.

These few cases indicate the nature of the evidence provided by artifact distributions at Hasanlu. In the future, such distributional patterns will be refined to show the location of specific artifact types and materials, as well as functional groups. For example, we know that in general bronze horse bits and cheekpieces were stored in Burned Building II, whereas iron and antler cheekpieces occurred in other buildings (see de Schauensee, this issue). This difference in material implies a difference in the value of the objects and, by extension, in the importance of the buildings.

Architecture and Artifacts: Changes in Building Function

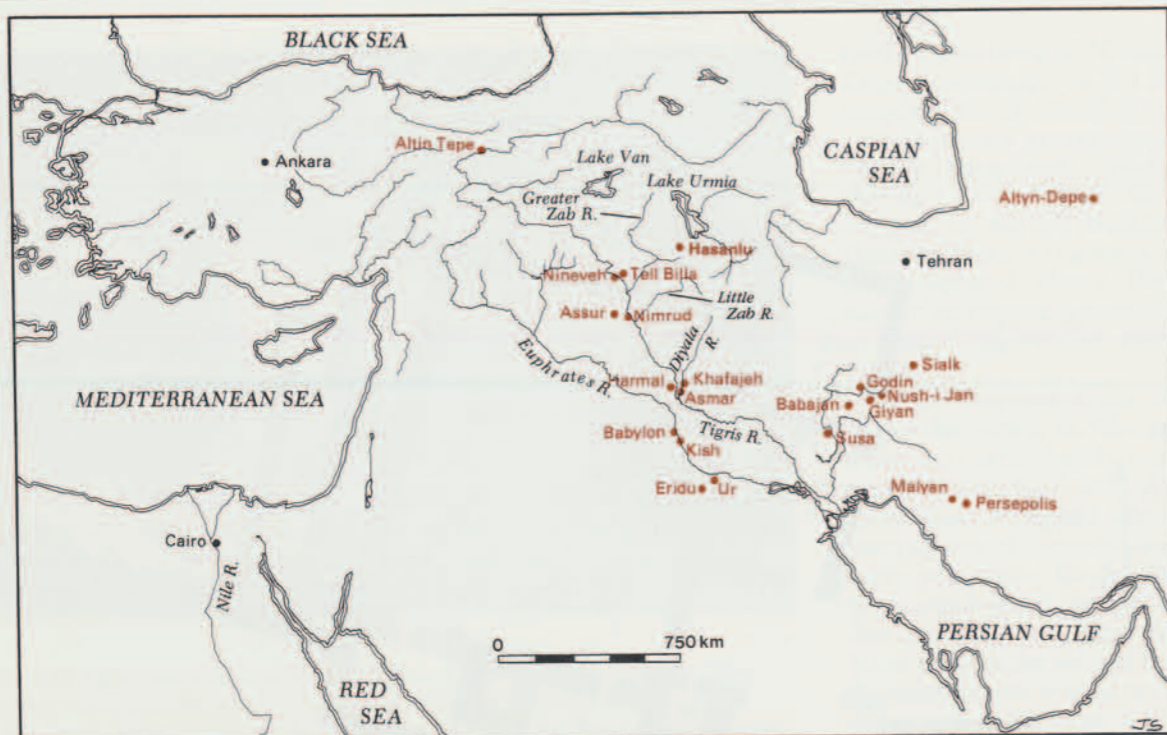
If we combine the information on building use provided by a study of architectural plans and alterations, with that provided by stratigraphy



- ▼ arrowpoints
- maces
- ▬ spears, pikes
- ◆ swords, knives
- ★ armor



23a,b
Contrasting patterns of distribution of weapons found on the floor (a) and in the second story collapse (b) of Burned Building II. (Drawn by the author; redrawn by Denise L. Hoffman)



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Map showing location of sites mentioned in text.

and artifact distributions, we can begin to draw some additional inferences. For example, both Burned Buildings IV-East and V are large buildings with the same general plan as Burned Buildings II and I-West. Moreover, the presence of what appears to be a fire altar in Burned Building V suggests that it may originally (that is, during period IVC) have served a ritual function of some kind. Burned Buildings IV-East and V were significantly remodeled during their occupation, and from plan alone we have suggested a change in function.

This is confirmed by differences in the nature of the floor deposits from one building to another. At the time of the destruction, the floors of the Burned Building I complex and Burned Building II were kept quite clean. The floors of Burned Buildings IV-East and V, however, were covered with an accumulation of rich black organic soil containing numerous bones of cattle. Lying on this deposit were the skeletons of horses who fell victim to the fire, and some areas of the floor were colored green, a stain commonly associated with latrine deposits. These data alone suggest a radical

difference in the use of Burned Buildings IV-East and V in period IVB as compared to IVC (when the formal columned halls were presumably kept clean).

Artifact distributions provide more detail on the use of these two structures during period IVB. The objects found in these trash-filled older buildings as well as in the connecting Burned Building IV-V included elaborate horse gear: headstalls made up of bosses, bits and cheekpieces, pendants and bells, and necklaces of glazed beads, along with a number of equestrian breastplates (see de Schauensee, this issue). The second floor level of Burned Building IV-V, between the two older columned hall buildings, seems to have been a storage area for similar equipment, as well as medium-sized pottery jars and pieces of textiles. There can be no question that in period IVB in this location we are dealing with storerooms of equestrian equipment and perhaps stables. Whether the horses killed in these columned halls were normally kept there or in some structure further east in the unexcavated area behind Building IV-V remains to be determined by excavation in the future.

Architecture as Symbol at Hasanlu

After a quarter century of excavation and archaeological analysis, Hasanlu is as well "documented" as many contemporary Assyrian sites with texts. Because so much material was accidentally and suddenly buried, and thereby preserved, Hasanlu provides an almost unprecedented opportunity for the functional analysis of architectural units and of the settlement as a whole. The successful integration of this information with studies of technology and with art historical analyses—both represented in this issue of *Expedition*—will eventually provide a rich and multifaceted reconstruction of life in this part of Iran.

The study of architectural form and function has been a focus of archaeological research in the Near East since its inception. What is clear as a result of our analysis of the Hasanlu Iron Age architecture is the contribution that it can make to an understanding of broader cultural and historical questions. In this article, we have described the use of buttressed facades. This architectural device is of particular in-

terest since it is commonly used in the architecture of Mesopotamia, where it is specifically placed at entrances to symbolize religious and royal power.

In Mesopotamia buttressed facades first appear on the exterior temple walls in the 4th millennium B.C. (as at Eridu); they were later used on walls enclosing courtyards or entry vestibules to temples (as at Khafajeh and Tell Asmar), as well as on some exterior palace walls (as at Kish) (see Amiet 1980). By the 2nd millennium such decorative elements were also commonly used on exterior palace walls and structures adjacent to religious precincts (as at Ur). This use of buttressed facades to mark enclosed courtyards or entries to temples and palace chapels in particular is clearly of a symbolic nature, setting the approach to such structures apart from ordinary domestic installations (Fig. 16).

At Hasanlu buttresses were used

extensively in the rebuilding of period IVB, and the placement of these decorative and symbolic elements is clearly deliberate and systematic. Buttresses were employed on the side walls lining the Lower Court, on the exterior facade of the Lower Court Gate, on the facades of Burned Buildings I-East and I-West flanking the Upper Court, and almost certainly on both side walls of Burned Building I-West. Along the western edge of the settlement, they are found on the Chariot Gate leading into the open area from the road system on the west slope of the mound, as a false front added to the eastern facade of Burned Building VI, on the eastern face of Burned Building VII, and on the gate structure linking Burned Building VII with an extended Burned Building III. This facing provided a continuous series of buttresses facing the open area in the center of the excavated area and the (buttressed) public buildings to

the south.

The carefully placed buttressed walls employed in the rebuilding of Hasanlu period IVB almost certainly symbolize the political-religious nature of the major buildings. Their use shows a combination of older Mesopotamian architectural practices with traditional local forms, a combination that is seen also at sites of the Median period, such as Godin Tepe, Babajan, and Nush-i Jan in west central Iran, and at the later Persian capital of Persepolis (illustrated in Amiet 1980). Documentation of the systematic and purposeful use of architectural elements and organizational concepts drawn from Assyria during period IV is clearly as important as texts or artifact comparisons for the demonstration of close cultural contact between Hasanlu and its neighbor, and for understanding the changing economic and political system that we call Assyria.

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