

Volume 26

Number 1

March 2010

SOUTH ASIAN STUDIES



BASAS

British Association for South Asian Studies



Routledge
Taylor & Francis Group

Aspects of Palace Life at Mohenjo-Daro

Massimo Vidale*

Department of Archaeology University of Padua, Italy

In Indus urban sites, monumental buildings (with famous exceptions such as the 'Great Bath' at Mohenjo-Daro or the 'Granary' at Harappa) are often difficult to distinguish from surrounding constructions, and their functions remain quite uncertain. Ninety years ago archaeologists failed to appreciate the complex interlocking among ancient floors and trampling surfaces, wall foundations and earthen fillings created by continuous rebuilding. However, when we reconsider architecture in light of new excavations in Pakistan and India, the hypothesis that large palace-like complexes actually existed at Mohenjo-Daro gains substantial support. A large architectural complex in the HR area had been previously identified by Sir John Marshall as a palace, and now we can recognize the remains of its monumental entrances with massive ring-stone columns. Another building to the rear, cursorily described in John Marshall's report, might be identified as a 'Little Bath', a tank surrounded by four fired brick pillars, with a well, a large drain, and a porch surrounded by carefully planned rooms. It seems to replicate on a smaller scale the prestigious model of the 'Great Bath' of the Citadel. Tanks and monumental entrances with columns might represent the elites' concern with ritual purity and their control of the access to restricted compounds. The architectural evidence ultimately supports the view that the early cities of the Indus Civilization were headed by heterarchic elites settled in individual, citadel-like walled enclosures and competing for political supremacy.

Keywords: Indus urbanism; Indus architecture; ring stones columns; Indus baths; bronze age palaces; Indus social structure

Searching for Indus palaces

If the excavation of Bronze Age monumental buildings such as palaces or temples is a major goal in the study of ancient Eurasian city states, the identification of palaces in the Indus Civilization remains quite controversial. One of the problems – and we leave aside temples – is an apparent lack of agreement of the precise meaning of the term 'palace'. For some scholars, in fact, a palace is the residence of a king or a supreme ruler. In this sense 'The absence of centralized architectural structures in the Indus civilization has led most scholars to conclude that the people ruling the Indus cities had different values and possibly a different form of political organization from that seen in other early states'.¹ In fact, after the above definition, many accept the absence of palaces in the Indus cities as fact, and as evidence of the absence of kings or well identifiable outstanding figures ruling the political system.²

As a matter of fact, Bronze Age palaces of the third millennium BCE in Eurasia rarely conformed 'monothetically' to the most obvious pre-established attributes of royal residences (large size, monumental façades, isolation, security defences, architectural layouts with corridors and large courtyards, astronomical orientations, inclusion of wide storage facilities). For example, the Knossos palace in Crete, of the Middle Minoan period, stood in partial isolation. It had an elaborate main façade and large storage facilities, but was not a compact building enclosed

within thick boundary walls. In southern Mesopotamia, where private elite or kingly residences have traditionally been very difficult to identify, the Early Dynastic palaces at Kish and the palace unearthed at Eridu were protected by continuous boundary walls and had inner courtyards and long corridors³ but no quarters with obvious storage rooms (not comparable, at least, with those found at Knossos or Boghazkoy in central Anatolia). Nor were they distinguished by particularly elaborate façades. In contrast, Royal Palace G at Ebla, in Syria, shortly after 2500 BCE,⁴ had an imposing façade, which gave onto a large courtyard opening, as frequently happened with temples and palaces in northern Mesopotamia and Syria, onto a dense, haphazardly grown urban settlement. Any attempt to include in this discussion the monumental architecture of ancient Egypt or Bronze Age China from the third to the second millennia BCE would only add problems to problems, besides exceeding the scope of the paper. Curiously, only the elite residences of the Central Asian khanates of the late third-early second millennium BCE, such as those rapidly excavated at Gonur, Kelleli and Togolok in Margiana (Turkmenistan), fulfil common expectations (at Gonur, there were even special burial grounds for kings or rulers attached to the living quarters⁵). In this paper, I rather use the term 'palace' as a synonym of 'large urban residence of an elite group'. Ideally, elitist residences should be large houses with many rooms, service facilities like kitchen and storage

*Email: massimo.vidale@beniculturali.it

units, large courtyards for group meetings, and corridors enabling some of the dwellers to move rapidly from one wing of the building to the other without interfering without the privacy of other residents. Bruce G. Trigger adds that the wealthiest residences in the earliest civilizations 'tended to open onto inner courtyards... often had only a single guarded entrance from the street and no external window, at least on the ground floor... [indicating] a concern for security at the family level and a distrust of the effectiveness of state authority'.⁶

Shereen Ratnagar, when searching for 'elite residences',⁷ does not use the term 'palace'. She tested, as possible residences of the wealthiest families at Mohenjo-Daro, some buildings in the Citadel (including the so-called 'Priests' College') and complexes excavated in DK-G (the 'palace' of Block 1 and the complex 18-19). According to Ratnagar, the largest residences at Mohenjo-Daro, when compared to the largest residential buildings in Mesopotamia, Syria, or in Crete, seem to be smaller and relatively undefended, lacking monumental, elaborate façades and thick fortified boundary walls. Ratnagar also points out the absence of rows of standardized store-rooms in these constructions. Similar storing facilities were traditionally identified in the 'centralized granaries' of Harappa and Mohenjo-Daro, but this view, scarcely supported by archaeological facts, is gradually losing credit. Instead of standing in isolation to better display the occupants' socio-ritual prominence, the largest Indus buildings so far excavated seem parts of densely built networks made of smaller private dwellings. Ratnagar's final answer for Mohenjo-Daro is negative: the evidence for such elitist buildings seems weak.

However, opinions diverge. For Kenoyer, at Harappa, in the third millennium BCE 'Many of the largest and best known buildings... perched high above the surrounding plain... would have been visible from all parts of the city to legitimize the power and authority of the rulers'.⁸ Nowadays, visitors of Mohenjo-Daro, where the architecture is still imposing, do not have this impression. But this is because the main constructions are preserved only as foundations, and also because the trampling surface, five thousand years ago, was between five and seven metres lower than the present alluvial surface. Originally, the buildings of the Citadel towered twenty metres or more above the plain, and some of them had at least two storeys. Both at Mohenjo-Daro and Harappa the perception of monumentality would have been strengthened by the massive mud brick walls, often protected by fired brick revetments that surrounded the most important mounds or urban insulas. At least part of these monumental walls and revetments were planned in relation to the largest constructions they enclosed and should be considered as belonging to the same architectural projects.

A fault of Ratnagar's discussion is that she does not consider how problematic it was to untangle the walls of

different construction phases in such multi-roomed and often almost labyrinthic compounds, as we see them in the published ground plans. The direction of hundreds of workers, very simply, did not allow the required scale of detail. The unreliability of the ground-plans of single blocks and buildings mapped at Harappa and Mohenjo-Daro was criticized by Leonard Woolley⁹ and later by Sir Mortimer Wheeler, when he openly stated that 'in most Indus buildings... (the) architectural history has never been worked out and the published plans are inadequate'.¹⁰

Was Wheeler's dry criticism too severe? At Mohenjo-Daro, the grid of streets and alleys remained unchanged for centuries, at least until the latest settlement phases. The houses, too, were rebuilt for centuries on the same foundations, though with frequent changes in the inner layout, i.e. adding, surrounding or cutting off rooms, courtyards or even whole wings. The maintenance of wells and centralized sewage facilities demanded continuous works of excavation, cleaning, dumping and infilling. In contrast, Marshall's excavators mapped as single units all foundations whose rare door-sills and exceptional fired-bricks floors rested roughly at the same absolute level, erroneously assuming that the city grew only in horizontal superimposed layers.¹¹

I have excavated a shallow trench in the Moneer South East Area of Mohenjo-Daro,¹² cleaned and recorded sections in the excavated houses of HR, excavated on surface and cleaned the edge of the gigantic system of platforms on the south edge of the HR triangular insula,¹³ and witnessed the German surface excavations on the edge of the Citadel mound. Every exposure abounded with mud bricks in various stages of decay, supporting the view that the rarity of mud brick architecture in the published plans is quite unrealistic. Most probably, most houses at Mohenjo-Daro were built in mud bricks above foundations in fired bricks, as people still do in Sindh. Whenever a wall had to be raised, mud bricks were removed and new fired bricks foundations were built over the old ones as a basement of new mud bricks. This is why many architectural features that look like 'high walls' unearthed at Mohenjo-Daro are just sequences of superimposed foundations in fired bricks. Most probably the workers failed to see many mud brick walls, standing or collapsed, as well as mud bricks fillings and inadvertently removed them.¹⁴

Moreover, 'Some of the largest public buildings at Mohenjo-Daro and Harappa appear to have been made entirely of wood, and specialized tools would have been needed to shape and fit the huge timbers for gateways and columns'.¹⁵ According to Mackay the Indus houses had carved wood verandahs and screens,¹⁶ upper floors of wooden beams, wooden staircases and windows sheltered by mats,¹⁷ door lintels made of wood;¹⁸ even the steps of the Great Bath were covered of wood planks.¹⁹ The excavations at Harappa more recently found abundant evidence of the use in domestic architecture of post-

units, large courtyards for group meetings, and corridors enabling some of the dwellers to move rapidly from one wing of the building to the other without interfering without the privacy of other residents. Bruce G. Trigger adds that the wealthiest residences in the earliest civilizations 'tended to open onto inner courtyards . . . often had only a single guarded entrance from the street and no external window, at least on the ground floor. . . [indicating] a concern for security at the family level and a distrust of the effectiveness of state authority.'⁶

Shereen Ratnagar, when searching for 'elite residences',⁷ does not use the term 'palace'. She tested, as possible residences of the wealthiest families at Mohenjo-Daro, some buildings in the Citadel (including the so-called 'Priests' College') and complexes excavated in DK-G (the 'palace' of Block 1 and the complex 18-19). According to Ratnagar, the largest residences at Mohenjo-Daro, when compared to the largest residential buildings in Mesopotamia, Syria, or in Crete, seem to be smaller and relatively undefended, lacking monumental, elaborate façades and thick fortified boundary walls. Ratnagar also points out the absence of rows of standardized store-rooms in these constructions. Similar storing facilities were traditionally identified in the 'centralized granaries' of Harappa and Mohenjo-Daro, but this view, scarcely supported by archaeological facts, is gradually losing credit. Instead of standing in isolation to better display the occupants' socio-ritual prominence, the largest Indus buildings so far excavated seem parts of densely built networks made of smaller private dwellings. Ratnagar's final answer for Mohenjo-Daro is negative: the evidence for such elitist buildings seems weak.

However, opinions diverge. For Kenoyer, at Harappa, in the third millennium BCE 'Many of the largest and best known buildings. . . perched high above the surrounding plain. . . would have been visible from all parts of the city to legitimize the power and authority of the rulers'.⁸ Nowadays, visitors of Mohenjo-Daro, where the architecture is still imposing, do not have this impression. But this is because the main constructions are preserved only as foundations, and also because the trampling surface, five thousand years ago, was between five and seven metres lower than the present alluvial surface. Originally, the buildings of the Citadel towered twenty metres or more above the plain, and some of them had at least two storeys. Both at Mohenjo-Daro and Harappa the perception of monumentality would have been strengthened by the massive mud brick walls, often protected by fired brick revetments that surrounded the most important mounds or urban insulas. At least part of these monumental walls and revetments were planned in relation to the largest constructions they enclosed and should be considered as belonging to the same architectural projects.

A fault of Ratnagar's discussion is that she does not consider how problematic it was to untangle the walls of

different construction phases in such multi-roomed and often almost labyrinthic compounds, as we see them in the published ground plans. The direction of hundreds of workers, very simply, did not allow the required scale of detail. The unreliability of the ground-plans of single blocks and buildings mapped at Harappa and Mohenjo-Daro was criticized by Leonard Woolley⁹ and later by Sir Mortimer Wheeler, when he openly stated that 'in most Indus buildings. . . (the) architectural history has never been worked out and the published plans are inadequate'.¹⁰

Was Wheeler's dry criticism too severe? At Mohenjo-Daro, the grid of streets and alleys remained unchanged for centuries, at least until the latest settlement phases. The houses, too, were rebuilt for centuries on the same foundations, though with frequent changes in the inner layout, i.e. adding, surrounding or cutting off rooms, courtyards or even whole wings. The maintenance of wells and centralized sewage facilities demanded continuous works of excavation, cleaning, dumping and infilling. In contrast, Marshall's excavators mapped as single units all foundations whose rare door-sills and exceptional fired-bricks floors rested roughly at the same absolute level, erroneously assuming that the city grew only in horizontal superimposed layers.¹¹

I have excavated a shallow trench in the Moneer South East Area of Mohenjo-Daro,¹² cleaned and recorded sections in the excavated houses of HR, excavated on surface and cleaned the edge of the gigantic system of platforms on the south edge of the HR triangular insula,¹³ and witnessed the German surface excavations on the edge of the Citadel mound. Every exposure abounded with mud bricks in various stages of decay, supporting the view that the rarity of mud brick architecture in the published plans is quite unrealistic. Most probably, most houses at Mohenjo-Daro were built in mud bricks above foundations in fired bricks, as people still do in Sindh. Whenever a wall had to be raised, mud bricks were removed and new fired bricks foundations were built over the old ones as a basement of new mud bricks. This is why many architectural features that look like 'high walls' unearthed at Mohenjo-Daro are just sequences of superimposed foundations in fired bricks. Most probably the workers failed to see many mud brick walls, standing or collapsed, as well as mud bricks fillings and inadvertently removed them.¹⁴

Moreover, 'Some of the largest public buildings at Mohenjo-Daro and Harappa appear to have been made entirely of wood, and specialized tools would have been needed to shape and fit the huge timbers for gateways and columns'.¹⁵ According to Mackay the Indus houses had carved wood verandahs and screens,¹⁶ upper floors of wooden beams, wooden staircases and windows sheltered by mats,¹⁷ door lintels made of wood;¹⁸ even the steps of the Great Bath were covered of wood planks.¹⁹ The excavations at Harappa more recently found abundant evidence of the use in domestic architecture of post-

holes, beams, and wall sockets meant for vertical or horizontal wooden partitions. Marshall wrote that the great amounts of charcoal in the Great Bath resulted from masses of timber used in the upper floor;²⁰ and according to Possehl the 'warehouse' (Wheeler's Granary) 'was an imposing building, mostly of wood'.²¹ No wonder that the extensive but loosely controlled excavations of the past often neglected and destroyed the faint traces of many important architectural elements.

In short, Wheeler was probably right: major architectural elements, partitions and wall joints were frequently missed and the ruins of important constructions may have been easily misinterpreted. There was little concern for the formation processes of the layers contained within the architecture, and digging with picks and without sieves the workers probably lost thousands of small finds, and missed important functional evidence. Even an experienced archaeologist with a keen interest in ancient technology like E. J. H. Mackay, while excavating DK-G, never found the specialized microliths (blades and micro-blades, scrapers and drill heads) so abundant today on the surface of Mohenjo-Daro. As a result, in his only synthesis of the Indus civilization he gave a completely distorted picture of the chert-processing and using industries in the main Indus cities.²²

I apologize for this long and perhaps ungenerous criticism of Marshall's and Mackay's field methods. It does not do justice to the unshakable prestige of their achievements, but it is undeniable that any detailed reconstruction of history of the buildings on the shaky bases of the extant recordings appears hazardous. In this light, it is easier to understand why some urban blocks were and are freely reconstructed as clusters of small private houses or, on the contrary, as wider architectural complexes. For example, Ratnagar (like other scholars) discusses the 'Priests' College' as a single palatial building, ignoring its very complex history of continuous rebuilding and ground-plan changes. In contrast, while commenting the architecture of the HR-B insula she arbitrarily isolates House V in Section B and other constructions as individual houses.²³ Thus, she followed Rai Bahadur Daya Ram Sahni who interpreted HR B, Block 2 as a cluster of 9 individual buildings,²⁴ only partially cleared down to their earlier phases of construction. Marshall, often uncertain about the ground plans reconstructed by his field directors, felt free, in this case, to give his own interpretation. He openly disagreed,²⁵ stating that in the main building phases Houses V to XIII belonged to a unitary large rectangular building measuring about 40 x 80 m and containing not less than 136 rooms and courtyards. After decades of decay and reconstructions of the excavated architecture, there is no way of ascertaining who was right. Any interpretation has a halo of arbitrariness.

Marshall ultimately concluded that 'The spaciousness of its courts and general massiveness of construction

suggest that this building could not have been an ordinary private house'. He was thinking of a large elite dwelling that occupied a prominent position on First Street. At this point, I grab what I have – my impression, Marshall's authority and the plans that so far I have strongly criticized – and propose that the rectangular construction in HR area, Block 2 was actually a unitary palace, or better the palace of the HR insula, exactly like the 'Priests' College' was the palatial pivot of the north-western Citadel.

Ratnagar, as a matter of fact, considered the citadels in their entirety as extended elitist residences. 'The Mohenjo-Daro Citadel as a whole is a fortified unit which contains architectural provisions for residence, ceremonial activities, craft work, and storage... the principle of seeking functional interconnections among adjacent structures is a sound one'.²⁶ Thus, before discussing the functions of the HR palace facing First Street, we may consider also its wider architectural context, taking into account the HR compound as a whole. This demands a short review of the urban formation processes of the Indus cities between 2800 and 2000 BCE.

Fortified citadels, platforms and urban formation processes

That citadels (i.e. urban insulas), in their entirety, were residences of rulers is an important suggestion. But before discussing the Indus elite seats of power in terms of interconnected functions, we should consider the major buildings of Mohenjo-Daro and Harappa in relation to their monumental basements. Since the early third millennium BCE, the Indus elites had built massive platforms and enclosures by the means of enormous investments of collective work. The detailed architectural studies of Mohenjo-Daro by M. Jansen and his team showed that the city was constructed with a threefold system of massive platforms and artificial fillings:²⁷ imposing monumental foundations, often protected by massive perimeter walls, for the main urban insulas; large foundations supporting individual buildings; and fillings and smaller-scale platforms for single rooms and courtyards.

The platforms of the main insulas and their outer walls doubtless acted as protections from floods, but also as defences and symbols of power reinforcing the social distance between local elites and commoners, low-status groups and outsiders. As both Harappa and Mohenjo-Daro were rebuilt for centuries not far from overpowering rivers, part of the factors envisaged in Wittfogel's hydraulic hypothesis might have been in play (I refer in particular to the continuous maintenance of platforms, wells and the associated sewage systems). The lower town of Mohenjo-Daro, at the beginning of the Integration Era, around 2600 BCE, hosted a limited

number of large, affluent dwellings. These residences were climatically isolated by thick boundary walls and substantial mud brick substructions, and were endowed with inner wells and efficient sewage facilities. In the following centuries the buildings were enlarged or surrounded by encroaching constructions, that hardly respected the limits previously established by urban regulations. Following the progressive building up of streets and floors, fired brick foundations and new mud brick walls were continuously superimposed. As a consequence, the walls of the houses gradually got thinner and the air conditioning standards worsened.²⁸

At Harappa, the excavations led by the joint Pakistani-American project revealed at a large and meaningful scale – but at the same time in great detail – the complex processes of growth of an Indus capital city. The so called bi-partite urban model, with a fortified citadel and a lower town encompassing mounds AB and E, dates back to the late fourth millennium BCE. The city developed through a process of gradual demographic agglomeration: in time, new districts grew around the two original settlements. Agglomeration was followed by a punctuated process of urban segregation, when massive mud brick enclosures with monumental gates were suddenly erected around some urban districts (as happened in mounds ET and F). A distinguishing feature of Indus urbanism is that each walled compound was entered through guarded doors, and intercommunication from a walled compound into another was strictly monitored. This policy may have been dictated by the escalating concern of the urban elites for the control of crafts and service specialists after they had gathered in the various settlement areas. In fact, production of ornaments and status objects had a strategic value when it came to symbolizing and representing various levels of rank or wealth within the urban sphere.²⁹

At Mohenjo-Daro, the whole HR area was planned and simultaneously built onto a system of platforms. The fronts of this construction run without gaps almost 600 m from west to east and reached a height of 5–6 m above the contemporaneous floodplain.³⁰ The HR mound forms a triangle-shaped 'citadel' with the shorter side to the west and the point to the east. Although this enormous unitary construction might have acted like a dam, protecting the southern edge of the city from floods, it also represented a fortified, segregated urban compound for which the term *insula* seems fully justified. George Dales' UPM excavation unearthed a continuous revetment of fired bricks on the western side of HR. The same revetment was identified during the surface excavations carried out by Leonardi along the southern edge of the same mound. It probably extended, in the original construction, along the whole perimeter of HR.

In 1993, B. B. Lal proposed that Indus citadels were the urban seats of a priestly class.³¹ The lower towns were

interpreted as the residences of craftsmen and traders, the forerunners of contemporary Vaisyas, while the peripheral settlements, together with some barrack-like structures of the lower towns, might have hosted workers, servants or marginalized groups comparable to contemporary Shudras. In this light, the urban space imagined by Lal would have been powerfully moulded by a pervasive, fully developed caste-like system of social stratification. However, former studies of archaeological intra-site variability at Harappa and Mohenjo-Daro had failed to provide any factual evidence of hierarchy or sharp social gradients between citadels and lower towns.³² In fact, judging by the finds, these separate urban districts could hardly be distinguished in terms of differential circulation, display and consumption of wealth.

Functional segregation along a north-west to south-east axis

Yet, it is beyond doubt that the main fortified citadels to the north-west contained the most prestigious monuments and important elite residences. At Mohenjo-Daro, the narrow alleys of the Citadel did not allow access to animal-drawn carts, while these vehicles, very important for supplying fuel and raw materials, could easily move across the wide streets of the lower town. Indeed, the architectural layout of the Citadel seems to have been originally planned for exclusive advantage of people exempted from menial activities. At Harappa, Rakhigarhi, Banawali, Surkotada and Kalibangan the western walled districts were topographically prominent also because they rose above the stratified remains of the earliest settlements. The collective memory of such ancestral locations might partially explain the prestige enjoyed by the citadels of each town or city. Even today, while negotiating rank and rights in a given area, Indian upper castes as a rule claim to descend from immigrants who settled locally before anybody else.

It was only in the latest phases of occupation that the citadels were temporarily settled by craftspeople and became irregular dumping grounds. This is the case, for example, of the shell working facilities in the southern part of the Citadel of Mohenjo-Daro, as well as of the craft debris dumped in the secondary filling of the Great Bath.³³ Even the so-called 'fire altars' excavated on top of the main mound at Kalibangan, traditionally interpreted as ritual fireplaces³⁴ might well represent later industrial installations that invaded abandoned monumental sectors.

On the other hand, the last decades of research have revealed that the eastern, and in particular the south-eastern sections of the lower towns of the two cities were occupied, intensively and for long periods, by craft workshops. The Moneer South-East Area of Mohenjo-Daro was covered by a stratified sequence of different craft installations and dumps, with an unbroken

scattering on surface of chert and semiprecious stones debris, shell fragments, copper and ceramic slag.³⁵ The same spatial pattern might be present within the triangular mound of HR, where the western settlement (HR-B) is centred around the rectangular 'palace' of Block 2, as originally identified by J. Marshall. In contrast, the surface survey of the eastern slopes of HR, always at Mohenjo-Daro, revealed an unbroken line of eroded fillings or dumps full of craft debris.³⁶

The Moneer and HR slopes look similar to the southern flank of Mound E and Mound ET at Harappa, whose surface was similarly studded with craft residues and pieces of abandoned installations.³⁷ In particular, the southern gates of the E and ET enclosures at Harappa were surrounded by houses and floors where craftsmen manufactured objects in steatite and faience, shell and agate beads, and ornaments in precious metals. In the same premises, people also made, used and dumped seals and inscribed tablets. Proximity to the gates was functional to craft workshops because it made easier the unloading of raw materials and the shipping of finished goods. The final impression of H.-M. L. Miller of the locational pattern of craft activities at Harappa is that manufacturing and dumping areas were spatially segregated,³⁸ being mostly located in the south or south-eastern part of the city.

In summary, the allocation of craft workshops at Mohenjo-Daro and Harappa seems to have followed for a long time a similar spatial organization: craft activities and workshops in the eastern or south-eastern urban districts, public buildings and elite residences in the western or north-western locations. If the surface record is not simply a by-product of more intensive erosion processes, the cognitive or institutional model recognized in the overall urban layout might be reflected, to no less a degree, within individual compounds or insulas.

The hypothesis that different functions and some forms of social segregation were distributed along a west/east urban axis should be verified in the other Indus cities of the second half of the third millennium BCE (even though not all Indus cities show the same model of urban bi-partition: Lothal, for example, might have a quite different urban layout). At any rate, the erection of walled enclosures around settled areas and their maintenance were a measure of the relative degree of socio-political integration of the insulas within the urban administration.

Indus cities as clusters of citadels

Both at Harappa and Mohenjo-Daro, new and more comprehensive information demonstrates that each walled compound was conceived and constructed as a 'citadel' on its own. At Harappa, Meadow and Kenoyer

ascertained that different mounds were settled at the same time, because they shared tablets in terracotta and faience impressed by the same seals or moulds. In matter of refuse disposal, water and sewage control, contemporaneous districts showed fluctuating degrees of urban maintenance. As the capability of mobilizing and managing manpower for the maintenance of public facilities was a function of the elites' authority, such fluctuations suggest to the excavators that political prominence could have shifted in time from one compound to the other. Chiefs and rulers of each community might have negotiated power by controlling and restricting access to the fortified enclosures and to important ritual buildings, as well as to the services and craft resources they contained.³⁹

Socio-economical control might have been indirect – if granted, for example, by the manipulation of family ties, ethnic or kinship affiliation, or ritual activities – or direct, if exerted by taxation and restriction of access. At any rate, it was pursued from different urban seats whose walls were a powerful symbol of separated identity. Continuous negotiation and intensive competition for prestige and social status also exploited the production and distribution of widely accepted material symbols. Kenoyer cogently showed how terracotta, fine clays, stoneware, glazed faience, copper/bronze, shell, steatite, silver and gold were used for making ornaments and status symbols similar in shape (reasserting cultural affiliation) but having quite different economic and symbolic values (thus expressing, at the same time, social stratification).⁴⁰ This ascending scale of raw materials and symbols, already active in the late fourth millennium, reached its apex in the second half of the third millennium BCE. It points to emulation as a key strategy while people claimed a superior status. In contemporary caste societies, similar processes of social negotiation and conflict were described in terms of 'sanskritization'.⁴¹

In short, my hypotheses are (1) that at Mohenjo-Daro and Harappa public buildings and elite residences were associated to the west or north-west, while industrial activities were mainly segregated in the south-eastern districts (only in later periods were the main citadels temporarily occupied by craftpersons and their dumps), (2) that we should abandon the traditional view of citadels as being opposed to lower towns, and think, instead, of a cluster of citadels or, better, walled compounds separately rising around the traditional fortified seats of urban settlement, (3) that the walled compounds constructed after and around the main citadel were inhabited by new elite groups competing for status recognition with their predecessors.

In this light, the idea that the largest Indus cities were built rapidly like an ancient Roman military camp – i.e., following a unitary pre-established town plan – should be finally discarded. Rather, we are dealing with cities progressively growing in form of juxtaposed segregated

urban blocks. The inhabitants were wealthy families and groups of followers that struggled to emulate the prestigious, long-established customs of the older Citadel; and competition may have persisted for centuries.

The HR urban area of Mohenjo-Daro, exactly like the main Citadel, was conceived as an extended, palace-like compound. In its centre, one or more powerful groups built a large elite residence with the purpose of displaying their status while organizing, at the same time, the activities of their followers. The possible identification in HR-B of a 'Little Bath', a small tank partially excavated and perhaps not recognized as such by one of Marshall's co-workers, would support this interpretation. This minor bath would embody in architecture the same principles of emulation and hierarchical upgrading that permeated the production and consumption of personal ornaments scaled in terms of ascending value.

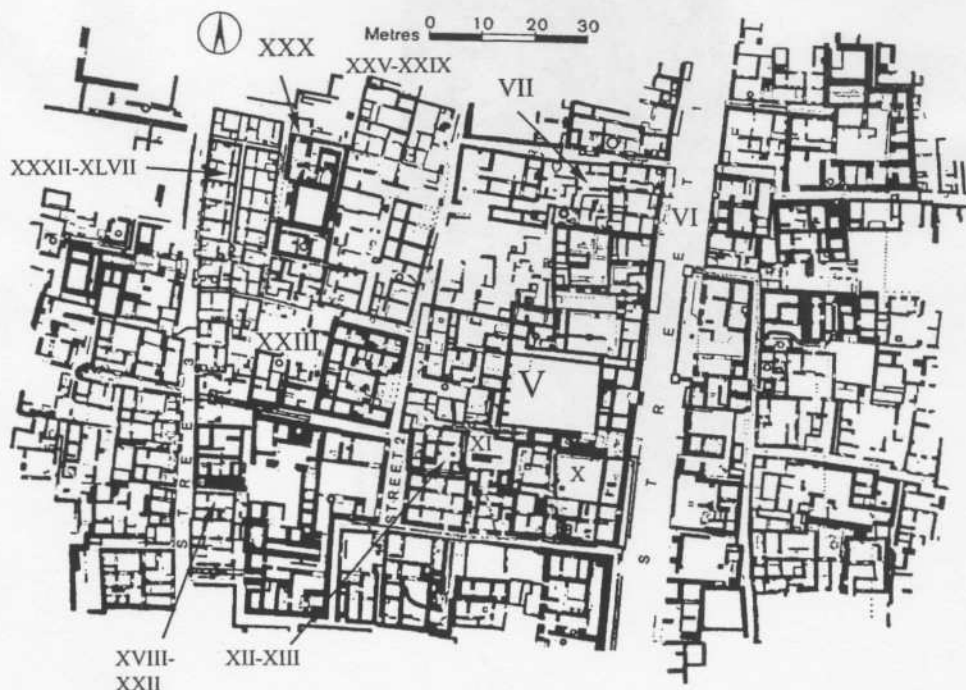
I will also argue that in Indus palaces columns made of limestone ring-stones and volute capitals were important and prestigious symbols of power, an idea already advanced by E. J. H. Mackay and more recently by G. Possehl. Finally, I propose that massive mud brick enclosures, complex gates, composite pillars and baths might be part of the same symbolic behaviour, pivoted on the extended palace-like complexes where Indus elites lived and ruled for centuries. In this context, I would like to acknowledge the insight of D. Miller when he originally stressed the impact of pervasive ideological models in the creation of the Indus urban world.⁴² It took me a long

time to realize how fruitful some of his viewpoints could turn out.

HR-B, description of an Indus palace

Keeping in mind the methodological caveats discussed above, let us see in detail how an Indus palace may have been organized. HR-B area was cursorily published by Sahni (Figure 1).⁴³ Block 2 (the palace including 136 rooms measuring 80 × 40 m) was built in full control of First Street. House V, at the centre of Block 2, had the largest open courtyard of the building. This room, 14 × 19 m wide, was entirely built with fired bricks. It was well paved and in front of the access, to the west, had a regular row of five thick buttresses. During a late phase, the courtyard was filled in by a massive mud brick platform. Apart from the main courtyard, and near its north-eastern and south-eastern corners, there are two other minor open spaces (respectively labelled rooms 124 and 54). J. Marshall proposed that the three courtyards were used contemporaneously for the same range of socio-ritual functions.

From the main courtyard one could reach the large room-corridor 49, distinguished by a rare, well preserved corbelled arch, two large niches in the wall at north and two rows of beam-holes that perhaps originally supported the floor of an upper storey. Not less than eighteen ring-stones rested along the northern wall of



1. Mohenjo-Daro, HR area: map of the excavated architecture. Roman numbers indicate the main buildings discussed in the text. House XXXIII is in the centre, to the rear of Block 2.

room 49. Their surface was rough, and some showed enigmatic rows of tiny cup-marks and dowel-like depressions on top. Two 'round stone caps' of unknown function and two limestone capitals with spiral volutes 'resembling Ionic capitals' (!) were found nearby. Two other identical capitals were unearthed in rooms 47 and 50. All capitals had a square base, an inner cylindrical hole like the ring stones, and measured little more than 30 cm along the sides and 15 cm in height. These ring-stones and capitals will be discussed in the following section.

Houses VI and VII, along the northern edge of this block, had courtyards, bathing platforms, and some pyrotechnological facilities. A hoard of precious jewels was found in room 8 of House VIII. On the western side, House IX contained further domestic facilities and a pile of shell inlays. To the south, Houses X, XI, XII, XIII had further craft installations and another hoard of copper and gold objects. Another ring-stone was discovered in room 104, which was the entrance to the palace from the south-western corner.

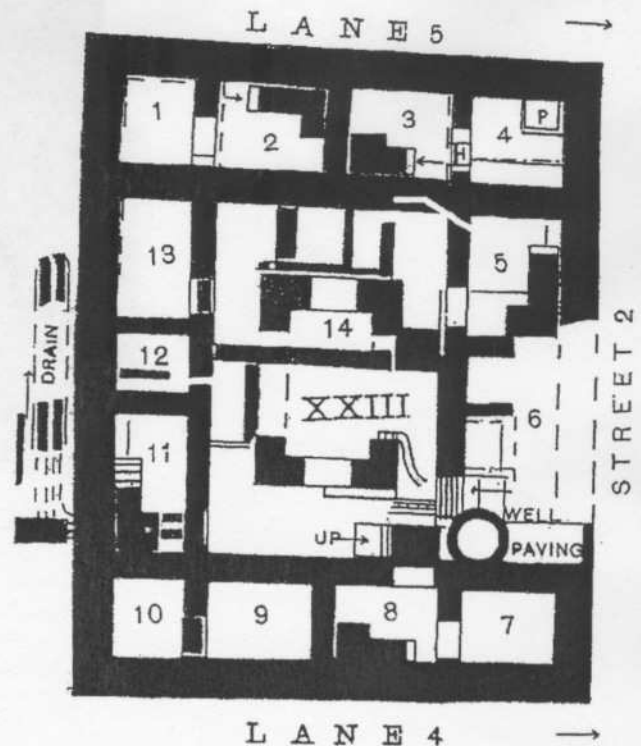
Block 3, immediately south of block 2, included a double line of well built houses (from XIX to XVII). Among the few finds recorded by Sahni in this area range further hoards of jewellery and gold objects. Block 4 (Houses XVIII to XXII) centres around a large courtyard filled with mud bricks. It was interpreted as single, large, elite construction, its core being House XVIII. Block 4 was provided with a row of modular subsidiary residences or shops (XIX to XXII), perhaps inhabited by menials or servants 'attached to the great house XVIII'.⁴⁴

As one enters Block 5, the whole eastern side of Street 3 appears entirely formed by standardized, small-sized housing units having 2 or 3 rooms. This layout is particularly evident in the large building formed by Houses XXXII to XLVII, interpreted by Sahni as 'shops' or 'quarters for retainers'. Marshall proposed that these constructions were inhabited by 'menials belonging to the main building' (house XXX, see below) or possibly were 'apartments for visitors'.⁴⁵ Lal interpreted them as barracks for the poorer people employed by the rich houses nearby.⁴⁶ The most likely comparison for this double row of structures are the so-called 'Workmen's quarters' at Harappa, considered by Wheeler to be 'barracks', 'coolie-lines', 'police barracks', or possibly 'quarters of a priesthood', but at any rate 'a piece of government planning'.⁴⁷ W. A. Fairservis also commented on these buildings and noted the similarity with Harappa,⁴⁸ but his interpretation was more careful. G. Possehl would rather consider them to be 'places where those citizens of the Indus civilization who were given to use bathing facilities would stay'.⁴⁹ Very similar, in spite of their badly damaged ground-plans, are the larger dwellings defined by Sahni 'feeble structures' and labelled in the same Block as XXV-XXIX.

Sandwiched between this double row of modular and simple houses, there are two of the most peculiar buildings ever found outside the Citadel of Mohenjo-Daro. Both are massive and outstanding constructions that contrast with the surrounding architecture. The first was labelled House XXX. Its imposing thick walls form two wide symmetrical rooms separated in the centre by a courtyard (room 55). The whole building was raised upon a solid mud brick podium.⁵⁰ Sahni interpreted House XXX as a temple, but the idea has no factual ground, because its architecture was not properly recorded⁵¹ and the finds it contained – as constantly happened at Mohenjo-Daro – were in secondary contexts of deposition.

A 'Little Bath' in the lower town

The second anomalous building of Block 5 is House XXIII, dated to the Intermediate Period. I believe it was a pool built on the model of the Great Bath, with the purpose of emulating the socio-ritual customs and the status of the inhabitants of the Citadel (Figure 2). Sahni and Marshall did not recognize it as a bath, and nobody, as far as I know, has paid further attention to its quite peculiar ground-plan and installations. I had the chance to briefly discuss the matter with my old director Michael Jansen, and he did not seem to agree.

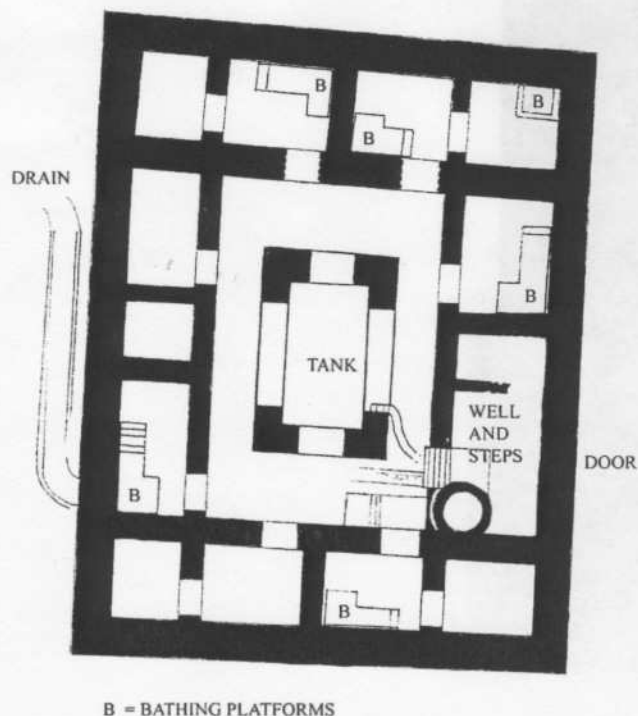


2. House XXIII, a possible bath, as recorded in Sir J. H. Marshall, *Mohenjo-Daro and the Indus Civilization* (London: A. Probsthain, 1931).

Presently, I have no means of demonstrating my theory, because it would require a new dig. But the identity of ground-plan and the associated facilities makes me almost certain that House XXIII was a bath with a central open tank. First, let us quote the excavator (*italics are mine*):

On plan, it is oblong, 62 feet in length by about 50 feet in width, and consists of a central rectangular court surrounded by thirteen rooms disposed around it . . . Room 6 probably did duty as the entrance chamber, but its east wall is ruined and no trace of the threshold or jambs has survived. The well in the southern portion of this room is constructed with well dressed bricks and has a covered drain to carry off waste water. On leaving the house, this drain emptied itself into a larger drain on the west. The staircase built against the entrance of room 8 is an addition of the Late Period. The purpose of the low brick of platforms with steps, which came to light in the angles of five of the rooms, is not apparent. The four brick piers in the middle of the court were intended to support a verandah. *They spring from below the level of the court in the Intermediate I Period, and the pavement of that Period is quite clear.*⁵²

The excavator carefully mapped a series of doors that in a later moment were blocked up. If we ideally remove the later additions and restore the original layout (Figure 3)



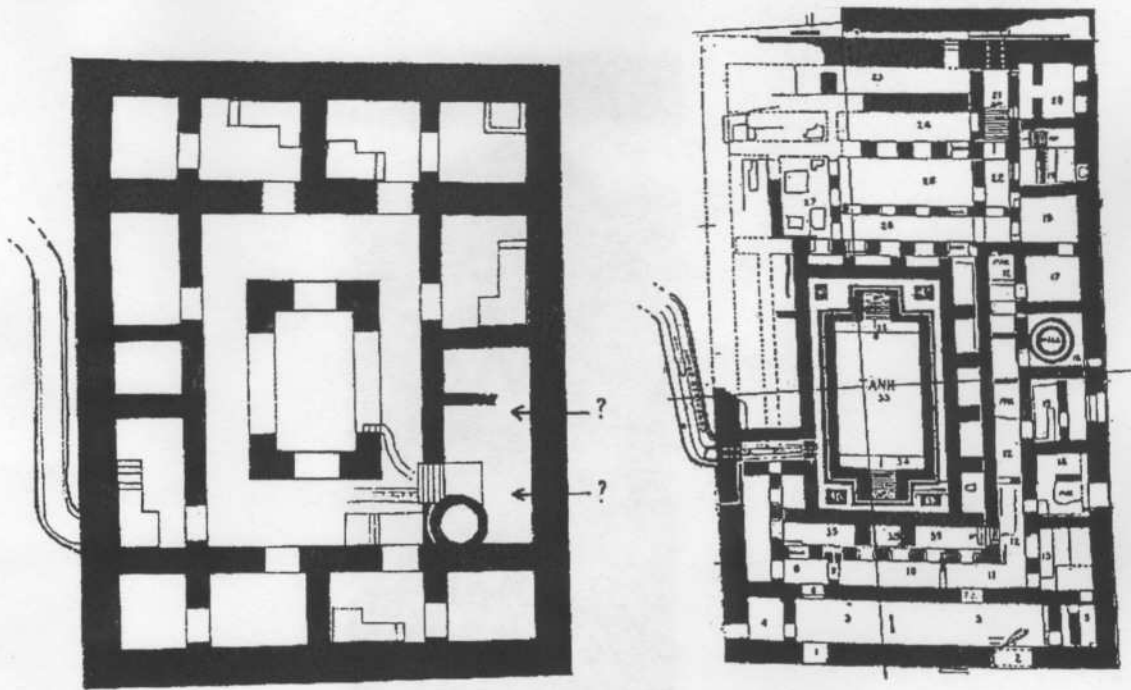
3. The possible bath of House XXIII redrafted reconstructing its original layout. The damage in the eastern wall coincides with the probable location of the main entrance. In the rooms surrounding the central tank there are five L-shaped stepped bathing platforms and a single square brick-paved washing platform, built in a later moment of the history of the construction.

the reconstruction shows its carefully planned concentric spaces and a perfect double axial symmetry. On the short sides, to the north and south, there was a double set of four rooms, arranged in communicating couples. Each couple of rooms was separated by an axial wall built exactly in the middle of the shorter sides. To the south, a door that later was blocked up gave access to the two rooms of the south-eastern corner. Three other doors, one for each corner, might have given access to the other rooms of the short sides.

The regularity of this construction is remarkable. In the centre of the longer sides, we may perhaps reconstruct a small room flanked by two larger symmetrical units. Probably, each of these rooms had its individual access to the central 'verandah'. Sahni placed the main entrance in the middle of the eastern wall, which, at the time of the dig, had already been partially dismantled by brick robbing.

To the south of this hypothetical entrance there was a large well. A small drain or waterduct departed from this well to flow into the central rectangular feature surrounded by the four 'L-shaped' brick piers mentioned by Sahni. The four central corner piers sprung from below the level of the court, suggesting that the excavators unearthed their inner face and cleared it below the surrounding paved floor, but stopped the dig before reaching a floor. On the western side, finally, we see the badly preserved remains of an unusually massive drain that turns north, follows the western wall of the building and turns north-west, to disappear under the foundations of later constructions.

In conclusion, my arguments for identifying House XXIII as a bath are (1) the similarity of its reconstructed concentric plan with that of the Great Bath, that is beyond discussion (Figure 4), (2) the position of the well and the layout of the western major drain, that is absolutely identical, (3) the fact that 'L-shaped' piers are almost unknown at Mohenjo-Daro and may be compared only with two identical features at the corners of the eastern side of the Great Bath's porch in Marshall's reconstruction, as well with the 'T-shaped' pillars of its colonnade, (4) the small stepped platforms, in the late levels of Mohenjo-Daro, used, as well as for bathing platforms, by servants who poured water, from above, onto kneeling persons. The platforms in House XXIII evidently had the same function, and show a long-standing association of this building with water and bathing. Probably at the end of the building's history the tank and its hydraulic facilities fell in disregard (in the upper levels of many excavated Indus centres the maintenance of hydraulic facilities was gradually abandoned in the last centuries of the third millennium BCE) and people bathed with the help of servants that climbed the platforms and poured water onto them from above. Although the scale of the two monuments is completely different (Figure 5), the basic proportions of the Little and Great Bath (in terms of



4. The layout of House XXIII, which appears as a very simplified version of the Great Bath on the Mohenjo-daro Citadel.

the ratio between long and short sides, and the spatial location of the main well and the western drain) are quite consistent.⁵³

Archaeological implications

Why did Sahni and Marshall recognise the inner space as a porch, hit the inner edge of the small tank, but not deepen the dig? Because, I suppose, they were already influenced by the rising paradigm of the opposition between citadels and lower towns. True, Marshall never used the term *citadel*, which was introduced by Wheeler, who stated that 'The acropolis on the one hand, and the lower city in the other fit in a familiar Eurasian polity';⁵⁴ but the dichotomy between the 'eastern mounds' hosting dwelling houses and the Stupa mound constructions, supposed to be religious, is in full evidence already in the first pages of Marshall's report.⁵⁵ As the Great Bath on the Citadel had to be a *unicum*, it was difficult to realize that a very similar but smaller building was surfacing in another urban sector.

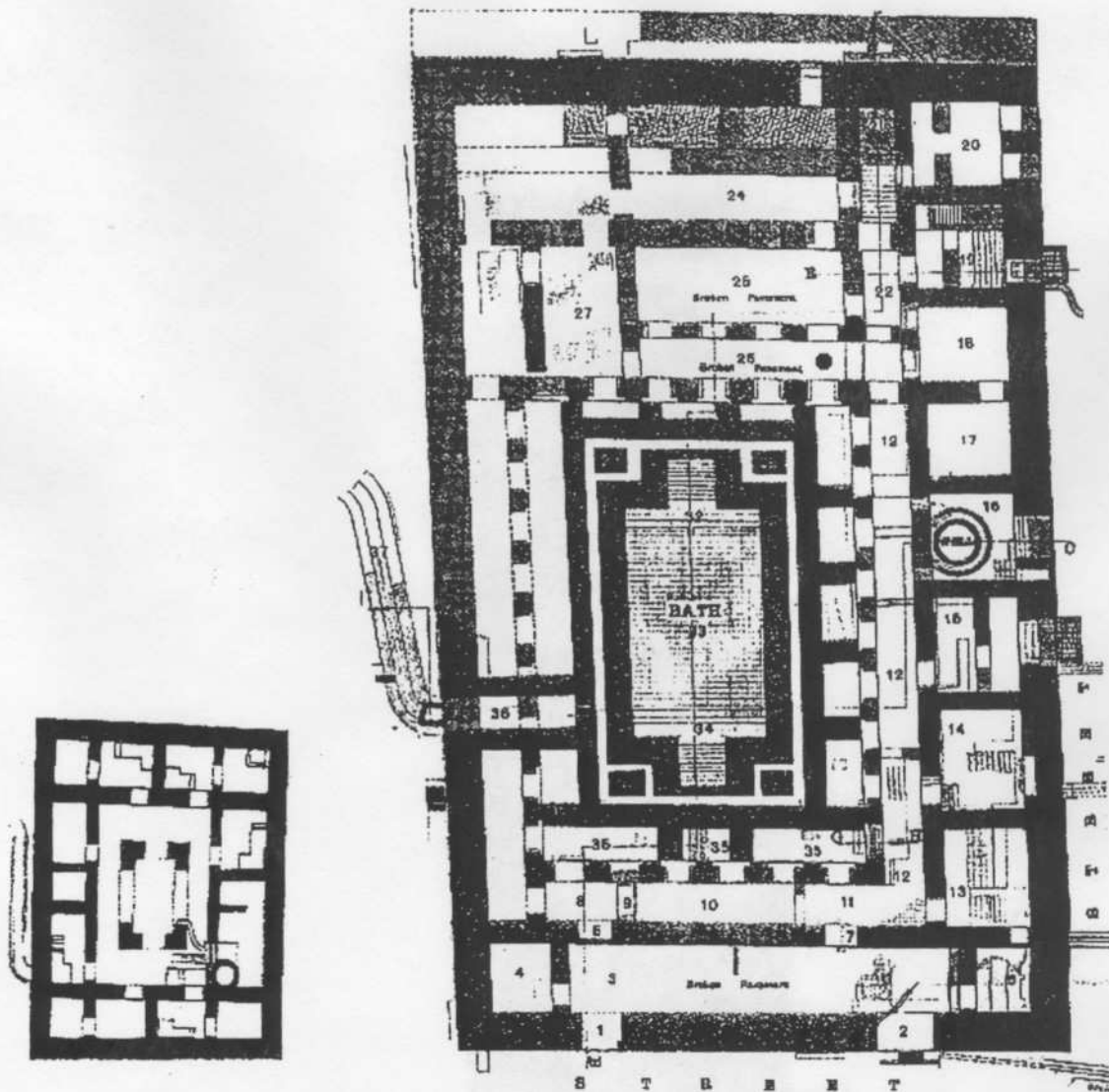
The discovery of this 'Little Bath', if and when confirmed by a future excavation, might completely change our understanding of Indus water symbolism and elite behaviour. The Great Bath of the Citadel is not an isolated architectural 'monster': similar pools might have been a distinguishing trait of palatial life in the major cities of the Indus civilization. The Little Bath of HR-B is placed to the rear of Block 2, exactly in the centre and in front of the core

of House V, near the main courtyard and the largest rooms (Figure 6). This pool could be easily accessed in full privacy from the better constructed and more important living quarters of the palace. Being a purposeful attempt by a group of 'newcomers' at emulating the habits and rituals of the traditional elites, the Little Bath might have expressed in architecture and ritual behaviour exactly what the ascending scale of raw materials mentioned above did in the field of personal ornamentation.

Interestingly, in the Citadel to the north-west (the older, more visible and prestigious seat of power), the Great Bath, possibly meant for public rituals and display, is the most imposing building, while the likely candidate for a nearby elite residence, the 'Priests' College', with its two corridors and about eighty rooms, looks comparatively small. In HR-B, in contrast, it is the bath that appears quite small, when compared to a much wider palace. The Little Bath of HR-B might have been more private and secular than its prestigious ancestral model.

Composite stone columns

The identification of the Little Bath would confirm that the cores of the walled compounds included different buildings that were functionally interconnected, planned and maintained with collective efforts as the seats of the urban elites. House V, with its central courtyard and its larger rooms to the rear, might have been the inner residential core of the extended palatial complex of Block 2.



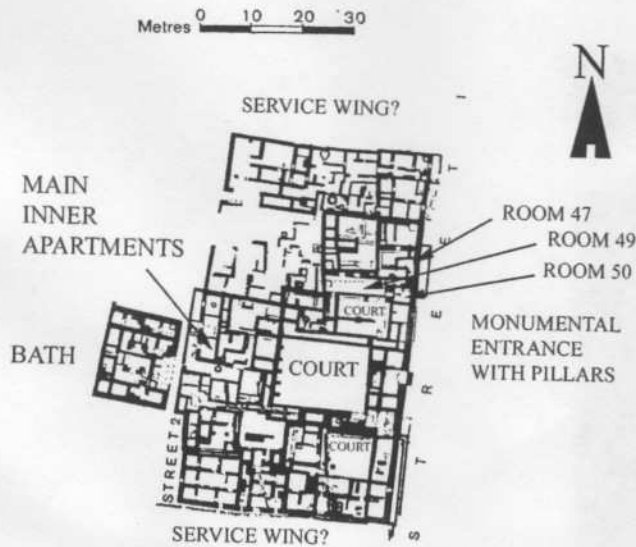
5. The orientation of the two buildings is slightly different: although the great Bath is much larger, the basic proportions of the perimeter walls, of the tanks and the location of the main drain on the western side are approximately the same.

The northern and southern quarters, where rooms are smaller and thickly built, and which contain wells and craft installations, were service wings. To the west of Block 2, rows of small modular units might have been inhabited by lower status groups organized for supporting, maintaining or protecting the nearby palace (or, following Possehl, were temporary residences for people accessing the bathing facilities). Other outstanding features of the HR-B palace were the ring-stones caps and capitals found in rooms 49, 47 and 50 of its premises.

Wheeler observed that at Mohenjo-Daro 'the miles of brickwork which alone have descended to us...are aesthetically miles of monotony'.⁵⁶ He thought, anyhow, that architectural decoration was entrusted to carpenters and plasterers. More vividly, Walter A. Fairservis wrote that 'certainly a good deal of the monotony of the city's

streets was relieved by the wooden superstructures, which may well have reflected in painted, carved, cloth- and mat-covered surfaces the color, exuberance, and humor which is found in the artifacts of the Harappans'.⁵⁷ In agreement with Sahni, Wheeler argued that Indus houses were embellished by wooden columns: 'Timber was used for supports, sometimes in conjunction with stone elements, as certain highly polished limestone bases or capitals and horizontally ribbed marble drums, found in the citadel in 1950 and clearly designed for use with posts or beams'.⁵⁸

Although the Dholavira discoveries made abundantly clear that Indus ring-stones were part of monumental columns fallen at the entrance of the largest elitist compounds, I think it is worth briefly retracing the history of archaeological interpretation of these outstanding



6. Block 2 in HR-B interpreted as single palace. Its various quarters might have had different functions: the central location of the 'Little Bath' (House XXIII), behind the main residential apartments, provides an example of how various buildings in the most important walled compounds of the Indus cities might have been functionally correlated. The location of ring-stones and capitals, although in secondary contexts, suggests that they came from one or more monumental entrances facing First Street.

architectural features. After all, they are the earliest stone columns of the Subcontinent and among the earliest in the world. Mackay, in the first excavation report, while commenting on the building techniques at Mohenjo-Daro, shared most of Sahni's opinions.⁵⁹ He noticed the absence of true cylindrical brick columns in the excavations, when such columns might have been easily constructed with wedge-shaped terracotta bricks similar to those regularly used for the construction of wells.⁶⁰

In his report of 1931, the same author described only one of the four square-based capitals found in Block 2 and mentioned by the excavator. The hemispherical limestone caps found together with the volute capitals, too, were interpreted as capitals (awakening once more Marshall's scepticism: see his footnote 4). Mackay stated that the volute capitals had crowned wooden square-section pillars and, although implicitly, opposed the idea that ring-stones and hemispherical caps were cultic or magic items of the *yoni-lingam* type, as proposed by Marshall and Sahni.⁶¹ Henry Cousens had told Marshall that the heavy rings 'were threaded on poles to form columns', but Marshall considered this possibility unlikely, mainly because similar miniature rings with no clear practical function had been found both at Mohenjo-Daro and Harappa.⁶² In another context Mackay stood up for the column hypothesis,⁶³ but noticed the differences in size and the problems posed by the presence in some ring-

stones of transversal dowel-holes. It was Marshall's turn to disagree openly.⁶⁴ In 1938 Mackay paid further attention to the matter.⁶⁵ The ring-stones of Block 2, room 49 had been found in water-logged deposits. Their state of conservation was variable, as some were badly weathered and heavily encrusted by salt. Mackay was able to describe the rings in detail only after they had been soaked in fresh water for a long time. In the end, he counted not less than twenty-seven rings, twenty-three of which complete and four in pieces. He ideally restored their original number to twenty-eight. The raw material is described as a hard cherty limestone, cream or grey in colour, most probably quarried in the Rohri hills. The rings had unpolished or heavily weathered surfaces. Mackay reported in a table the dimensions of each ring.⁶⁶ The maximum diameter and height are positively correlated, showing that the rings belonged to one or more series of decreasing size. He also found that the number of cup-marks on the rings was inversely related to their maximum diameter (the largest the ring, the lower the number of cup-marks on top). His table also showed that the larger ring-stones had larger holes, while those of smaller rings were correspondingly smaller. Mackay's final interpretation was that ring-stones, as Cousens had suggested, were column segments, originally threaded onto an inner tapering wooden shaft. While the transversal dowel-holes fastened the stone to the inner shaft, the cup-marks were masons' devices used for planning the assemblage of the rings. He also proposed that the twenty-seven or twenty-eight rings belonged to two monumental columns made of fourteen segments each, whose height would have been near to 3.5 m.

At Harappa (more rarely at Mohenjo-Daro) ring-stones were made with an attractive yellowish and red, fine-grained banded limestone. Its chemical features are compatible with those of the Pachhman stone found in Kutch and in northern Gujarat, and more specifically with a source and ancient mining area on the western edge of Khadir island, very near to Dholavira (Kutch, India). Here an ancient quarry still shows, abandoned on the surface, some rough-out or unfinished column segment of the same type. In the second half of the third millennium BCE, finished or unfinished ring-stones travelled along the Indus-Saraswati from Kutch to Punjab via a hard and dangerous trip of 500-1000 km. In contrast, the large Indus city of Ganweriwala (Cholistan, Pakistan) obtained ring-stones from the Jaisalmer quarry district in Rajasthan. In this case the transport required a much lesser effort.⁶⁷ Mackay proposed that the space left between the wooden shaft and the inner hole was filled with plaster.⁶⁸ He had previously noted traces of a red pigment on the surface of one of the volute capitals.⁶⁹ It is possible that also the outer surface of the rings was originally covered with a thin layer of plaster or paint. And what about the function of the capitals? Mackay still

adhered to his old view: they had crowned wooden pillars, and had nothing to do with the ring-stones columns.

As we have already seen, the American archaeologist did not believe that ring-stones and stone caps were *yonī* and *lingam* symbols. If Mackay mentioned such a possibility in a dry footnote, he probably did it only for minimizing his continuous, old-time frictions with Marshall (very convinced of his opposing cultic interpretation). Coming to their context of deposition, Mackay noticed that the rings had been stored in a haphazard way and were covered by debris. Perhaps they were meant to be moved and remounted elsewhere, if not recycled as a source of raw material. Although their context was clearly secondary, two stone capitals found in rooms 47 and 50 suggest that the columns originally stood in one or more nearby entrances opening onto First Street. Another ring-stone was found near an entrance room in the south-western corner of the complex.

A row of three complete ring-stones and one fragment was found in L area, section D, in the south-western margin of the Citadel mound.⁷⁰ Topographically, the site corresponds to the mouth of a deep, large depression that might have formed above an ancient monumental entrance. The rings lay near a double line of identical brick piers, following the north-south orientation of the local architecture and alleys. Each brick base measures about 92 × 58 × 49 cm. The original distance among the piers is about 3 m. The central pier might have supported a ring-stone column erected in the centre of a wide gate, flanked by a badly preserved row of small rooms. The headless statue of a kneeling figure was found near one of the brick bases.⁷¹ It represents a bearded individual with a naked shoulder, an arm on a raised knee and a long braid. The piers gave access to a large open space, surrounded to the east and south by perimeter rooms. In one of the rooms of the southern wing Mackay found the broken head of a statue made of a yellowish limestone representing a bearded man, the hair tied in an elaborate knot.⁷² The head does not fit together with the first fragment. Mackay dated the sculptures (or rather their destruction) to a very late moment. Although it is impossible to ascertain if they were coeval, columns and stone statues could have been parts of the same architectural context.

The list of ring-stones found at Mohenjo-Daro also includes a specimen from HR-A, House II, court 6 and some pieces that look Pachchman stone, which I personally observed twenty-five years ago near DK-A, at the eastern edge of the lower town – possibly, the ruins of another monumental gate. At Harappa, a peculiar ‘wavy-ring stone’ has long rested in the north-eastern corner of the Citadel, near the holy grave-shrine of Naugaza, together with a large flat perforated disk of white marble. Similar specimens came from the contemporary village area. Reportedly, a simple flat ring stone was found in Mound ET, near the old Police Station.

In summary, ring-stones at Mohenjo-Daro were found in front of streets or passages and in relation to monumental accesses or gates, and the evidence of Harappa does not contradict this view. They had been identified as parts of composite columns, but Marshall’s interpretation of rings and caps as elements of a proto-Hindu cult was simpler and more appealing. It is not surprising that, in the end, his views were generally accepted⁷³ and eventually stimulated unnecessary conjectures on possible religious and astronomical meanings of the rings.⁷⁴ Nowadays, at the entrance of the Mohenjo-Daro Museum a group of rings surmounted by conical stones still supports the canonical views of J. Marshall. The columns of Cousens and Mackay were almost forgotten, until the discovery at Dholavira of the ruins of monumental doors whose ring stones came from fallen or dismantled columns. A famous picture taken on the East gate of the Castle shows ‘a polished and beautifully moulded pillar base into the shape of a bead or *damaru* placed on two polished stone blocks right in the centre of the length (of the passageway) ...’.⁷⁵ Besides this base, there were ‘two identical pillar elements similarly polished placed upon one another by the side of of the *in situ* pillar base. Each of them is perfectly circular in cross-section with a convex side and a flattened top, as well as bottom, with a circular socket-hole in the centre. A similar hole is present in the *damaru* shaped pillar base. It is a matter of conjecture as to how and where those large bead like members were placed in a composite pillar’. Similar rings were found in the west gate of the Castle: in this case, one of them still rested slanting upon its concave base (what Bisht describes as a bead-like or *damaru*-like pillar base is a well designed drum with a peculiar convex or cyma-like profile). Identical pieces were found at Mohenjo-Daro, in HR and DK-G⁷⁶ although not in the context of room 49 or in the nearby spaces.

The evidence of Dholavira demonstrated for good that Cousens and Mackay were right. According to Possehl we are dealing with ‘pillars and freestanding columns ... At least some of the so-called Harappan ring stones were used in these constructions’.⁷⁷ In the next section I will discuss an iconographic source, hitherto ignored, that fully supports this conclusion. We may finally lay aside the traditional religious interpretations favoured by J. Marshall and his followers (at least in terms of *yonī-lingam* representations) and try to reconstruct the original form, function and symbolism of Indus columns.

Forms and meanings of the Indus composite stone columns

Mackay’s excavation of SD area, L section, suggests that a ring-stone column stood in the centre of a large gate leading to the southern extension of the Citadel. Here the

column or columns probably rested above a square pier of fired bricks. The Dholavira Castle gates point to a pillar raising on one or two superimposed square polished bases. In Bisht's pictures, the base below the concave element has a rough projection in the middle of the left lateral face, as the piece was left unfinished, or it was intended to fit into the corresponding cavity of a missing block. Thus, considering also Bisht's comments on local stone robbing, it is hard to say if such square bases were freestanding elements or formed, on the contrary, a continuous threshold below the ground.

Above the square basement there was a concave drum, followed by a series of superimposed ring-stones. How many? Mackay's idea of two columns, each made of twelve rings, seems unrealistic. In accordance with the four square capitals with spiral-like volutes found nearby, seven rings would be a more reasonable estimate. Seven superimposed ring-stones, plus the composite basement and the capital would make a column with a total height of more than 2.2 m: enough for a comfortable, though not generous access (however, my reconstruction cannot explain the two hemispherical stone caps, whose interpretation as capitals would appear quite forceful).

Indus composite columns, thus reconstructed, would show a subtle and attractive game of rhythmic alternance between square and round superimposed volumes, and of flat, concave and convex surfaces, culminating in a tapering capital with four volutes.⁷⁸ One might even recognize in their form the origin of the stone columns of the later historical period, distinguished by alternating round and square volumes. Their surprising volute capitals can only be considered an archaic, independent invention of the later Ionic model of the Mediterranean cultures.

Wavy ring-stones, too, might have been superimposed to form columns, as suggested at the time of the Harappa excavations by the two wavy rings remounted in a picture in the report by Vats.⁷⁹ If this was the case, they communicated an impression of strength, solidity and, at the same time, inner dynamism. Admittedly, it is hard to imagine how such a column might have been crowned, or how the flat stone disk presently kept at Naugaza's shrine at Harappa might have fitted with the shaft. Wavy ring stones seem to have been used in this latter city⁸⁰ but not at Mohenjo-Daro, where only miniaturist replicas were found.⁸¹ At any rate, there is no doubt that in both cities small wavy rings and simpler miniaturist ring-stones formed decorated shafts or miniature pillar models.⁸²

The independent iconographic source I mentioned above are the few impressed terracotta tablets found at Mohenjo-Daro (Figure 7), bearing on both faces the same figures and most probably impressed after the same moulds or seals.⁸³ All come from DK area. On one side they show a labyrinth-like cross and two signs. On the opposite face, they bear in higher relief what I identify as the image of a column made of six superimposed ring-

stones. The lowermost segments are thinner and flat, and I am tempted to identify them as a flat square base capped by a concave ring (the published pictures still leave a margin of doubt). In this case, the image of a composite column was simplified or shortened, because one would rather expect seven rings for each shaft. From top (the tablets are reproduced upside down, and the shadow is not consistent) springs a tapering inner shaft, which ends in the schematic representation of a volute capital.

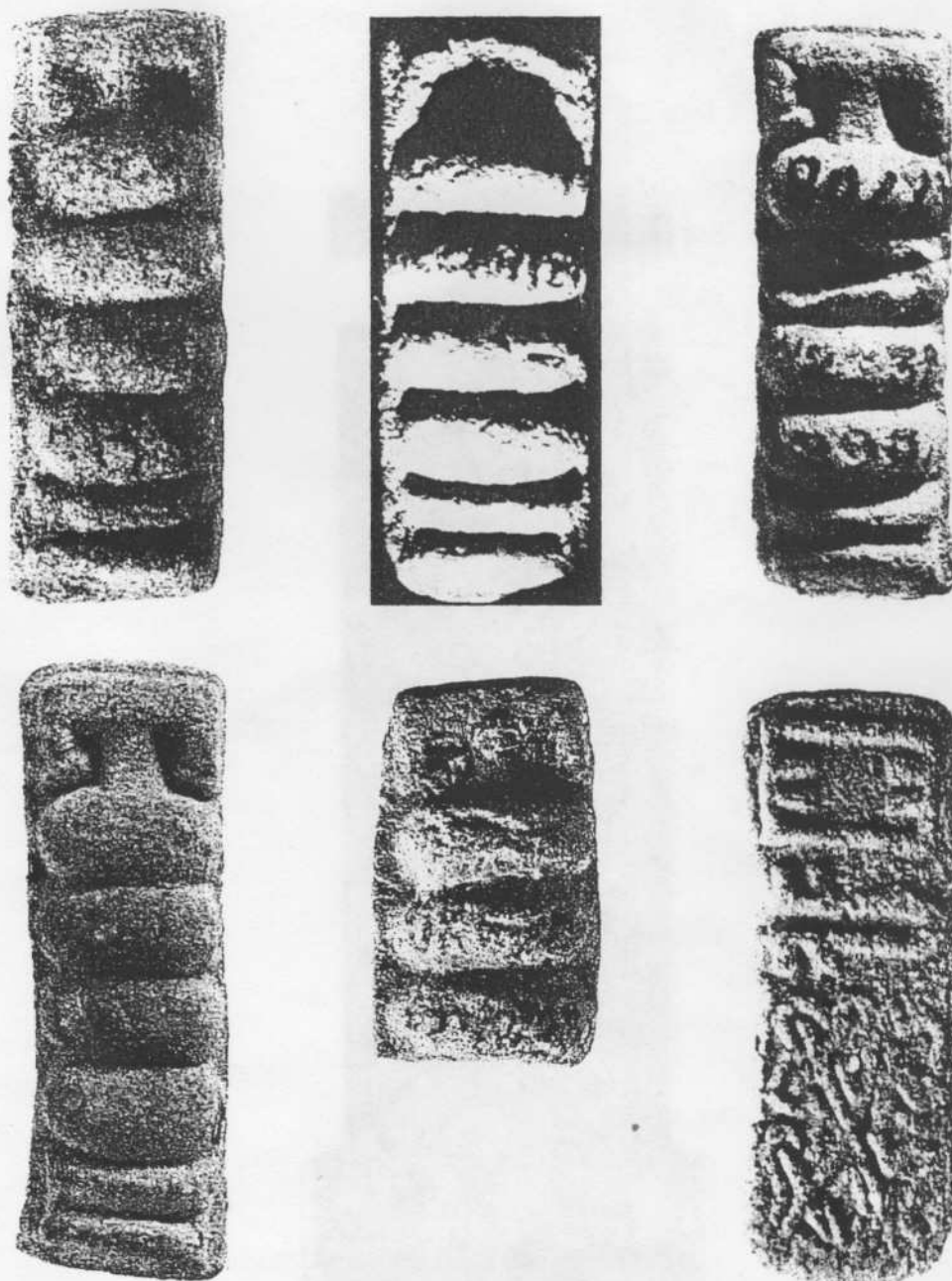
Besides supporting the evidence of Dholavira, these rare tablets show the relevance of the symbol of the composite column in Indus iconography. The same importance is perceived in the miniaturist columns made of ring-stones in 'stone, shell, faience and imitation carnelian'.⁸⁴ Particularly beautiful are some miniaturist 'imitation carnelian' wavy ring-stones, made of talc or siliceous faience, covered with a thick bright red slip and painted white with dotted kidney designs. Such miniature objects were found both at Mohenjo-Daro and Harappa.⁸⁵ Their bright red colour matches the traces of red pigment found by Mackay on one of the volute capitals in House V, Block 2 of HR-B (see above).

Finally, we may consider a small ceramic object found by Mackay in DK-G.⁸⁶ Perhaps it belonged to a cheap miniaturist column (Figure 8). It is formed by a cylinder surmounted by a slightly tapering part with a square section; a cylindrical hole runs across its length. As it closely resembles a columnar segment capped by a square capital, it might confirm independently the reconstruction of Indus stone columns here proposed.

Conclusions

Ring-stone columns, made of the yellow banded limestone from Khadir, of the Rajasthani Jaisalmer stone, or of cherty limestone from Rohri (perhaps painted red), were highly crafted and expensive artefacts. Their image may be added to the repertory of signs and mythological or religious symbols encountered on Indus terracotta tablets. Miniature pillars, parts of screens, windows and wooden furniture repeated in the interior the symbolic meanings of the columns erected at the entrances.

Indus monumental gates and doors often had elaborate ground-plans. Their function was to restrict access and to control the movement of individuals between separate buildings and walled enclosures. The fact that at Dholavira, and perhaps in the south-western corner of the Citadel of Mohenjo-Daro ring-stone columns stood isolated in the middle of doors, instead in pairs to form the jambs, might explain why the miniature tablets found at Mohenjo-Daro represent single pillars. The evidence also supports, even without incorporating the elaborated conjectures of A. K. Coomaraswamy,⁸⁷ the possibility of a genetic – although admittedly remote – link between

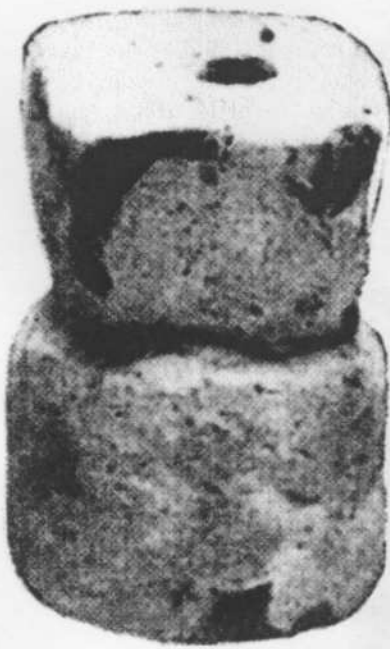


7. A few terracotta tablets found in DK area, Mohenjo-Daro, bear the image of a composite column made with superimposed ring stones apparently threaded on a wooden tapering axis. The column is evidently capped by a capital with strongly curved volutes and perhaps rises above two thinner basal segments. The second from the bottom might be a concave drum, like those found as column bases in the Castle at Dholavira. These images of ring-stone columns were impressed from the same seal or matrix. The rear always shows two Indus signs and a labyrinth-like cross design. After S. G. M. Shah and A. Parpola, *Corpus of Indus Seals and Inscriptions*, Vol. 2, 'Collections in Pakistan' (Helsinki: Suomalainen Tiedeakatemia, 1991).

Indus columns and the most important symbol of authority and ritual purity, in terms of conformity to *dharma*, in the early historical period.

In general, the archaeological record of Indus urbanism confirms the 'heterarchic' frame of power already influentially suggested by Greg Possehl. Instead of being

dominated by a single palace or temple, and by a single lord, major cities included a number of walled compounds enclosing palaces and attached buildings. Such residences were settled by independent elite groups, which shared the same ideology and on this basis competed for prominence and political power. Gates,



8. A probable miniaturist model of a composite column in terracotta, found in DK-G area at Mohenjo-Daro, showing a ring-stone capped by a square-based tapering capital, very similar to those found in Block 2. The interpretation is supported by the central hole. After E. J. H. Mackay, *Further Excavations at Mohenjo-Daro* (Delhi: Government of India, 1938).

monumental entrances with composite pillars and ritual baths were built on as many 'architectural interfaces' between external public spaces and palatial interiors. While gates allowed physical control and security, the columns were powerful symbols of the superior social status of the residents. Tanks, finally, might have granted the ritual purity required to those who entered the restricted spaces of the palaces.

By emphasizing rights of access and purity, architecture might have expressed the same pervasive concern with social discrimination, classification and eventually symbolic inclusion we still witness in countless aspects of the traditional culture of the Subcontinent. Although the case for an incipient caste system developing with the Indus civilization in the fourth-third millennium BCE is and will remain highly speculative,⁸⁸ a new interpretation of its architecture brings intriguing results, and ultimately confirms the relevance of this line of enquiry.

ACKNOWLEDGMENTS

The author is indebted to the anonymous referees, whose criticism was very helpful in improving the paper, and to the editor for his continuous and invaluable assistance.

NOTES

1. J. M. Kenoyer, 'Wealth and Socio-economic Hierarchies of the Indus Valley Civilization', in *Order, Legitimacy and Wealth in Early States*, ed. by J. Richards and M. Van Buren (Cambridge: Cambridge University Press, 1999), pp. 90–112 (p. 90).
2. B. B. Lal, 'A Glimpse of the Social Stratification and Political Set-Up of the Indus Civilization', in *Harappan Studies*, ed. by G. L. Possehl and M. Tosi (New Delhi: Oxford & IBH Pub. Co., 1993), vol. 1, pp. 63–71 (p. 70); G. L. Possehl, *The Indus Civilization. A Contemporary Perspective* (Walnut Creek, CA: Alta Mira Press, 2002), p. 148.
3. M. Liverani, *Antico Oriente. Storia società economia* (Roma-Bari: Laterza, 1988), p. 172, fig. 35.
4. Liverani, pp. 201–31.
5. V. Sarianidi, *Margiana and Protozoroastrism* (Athens: Kapon Editions, 1998).
6. B. C. Trigger, *Early Civilizations. Ancient Egypt in Context* (Cairo: The American University in Cairo Press, 1993), pp. 47–48.
7. S. Ratnagar, *Enquiries into the Political Organization of Harappan Societies* (Pune: Ravish Publishers, 1991), pp. 63–65.
8. J. M. Kenoyer, *Ancient Cities of the Indus Valley Civilization* (Karachi: Oxford University Press, 1998), p. 62.
9. See G. L. Possehl, 'Sir Leonard Woolley Evaluates Indian Archaeology', in *Harappan Studies*, ed. by G. L. Possehl and M. Tosi, vol. 1, pp. 1–56 (p. 40).
10. Sir R. E. M. Wheeler, *The Indus Civilization*, 3rd edn (Cambridge: Cambridge University Press, 1968), p. 44.
11. M. Jansen, personal communication.
12. M. A. Halim and M. Vidale, 'Kilns, Bangles and Coated Vessels: Ceramic Production in Closed Containers at Moenjodaro', in *Interim Reports*, ed. by M. Jansen and G. Urban (Aachen: IsMEO-Aachen-University Mission, 1984), vol. 1, pp. 63–97.
13. Analyzed in G. Leonardi, 'Moenjodaro: From Surface Evaluation to Ground Testing', in *Interim Reports*, ed. by M. Jansen and G. Urban (Aachen: IsMEO-Aachen-University Mission, 1988), vol. 3.
14. Possehl, 'Sir Leonard Woolley', in *Harappan Studies*, ed. by Possehl and Tosi, pp. 1–56; M. Jansen, 'Mohenjo-Daro – Stadt am Indus', in *Vergessene Städte am Indus*, ed. by G. Urban and M. Jansen (Mainz am Rhein: Phillip von Zabern, 1987), pp. 119–36.
15. Kenoyer, *Ancient Cities*, p. 57; see also Wheeler, p. 51.
16. E. Mackay, *The Indus Civilization* (Lahore: Sang-e-Meel Publications, 2001), p. 30.
17. Mackay, *The Indus Civilization*, pp. 33–35. These windows are clearly reproduced in special vessels

- found at Harappa: see Kenoyer, *Ancient Cities*, fig. 3.13.
18. Mackay, *The Indus Civilization*, p. 36. A wooden lintel was actually found by George Dales in his UPM excavation: see G. F. Dales, 'Moenjodaro Miscellany: Some Unpublished, Forgotten or Misinterpreted Features', in *Harappan Civilization*, ed. by G. L. Possehl, 2nd rev. edn (Delhi: Oxford & IBH and the American Institute of Indian Studies, 1993), pp. 97–106, fig. 8.2.
 19. Mackay, *The Indus Civilization*, p. 55.
 20. Sir J. H. Marshall, *Mohenjo-Daro and the Indus Civilization* (London: A. Probsthain, 1931), p. 24.
 21. Possehl, *The Indus Civilization*, p. 187.
 22. Mackay, *The Indus Civilization*, p. 160.
 23. Ratnagar, fig. 4.
 24. In Marshall, pp. 187–213.
 25. Marshall, pp. 22 and 189–90.
 26. Ratnagar, p. 67.
 27. G. Urban and M. Jansen (eds), *Dokumentation in der Archäologie. Techniken Methoden Analysen* (Aachen: Forschungsprojekt Moenjo-daro DFG, 1983); Urban and Jansen (eds), *Interim Reports*, vol. 1; M. Jansen and G. Urban (eds.), *Interim Reports*, vol. 2 (Aachen: IsMEO-Aachen-University Mission, 1987); Leonardi, 'Moenjodaro', in *Interim Reports*, ed. by Jansen and Urban, vol. 3.
 28. H. Wilkins, 'From Massive to Flimsy: The Declining Structural Fabric at Mohenjo-daro', in *South Asian Archaeology 2003*, ed. by U. Franke-Vogt and H.-J. Weisshaar (Aachen: Linden Soft, 2005), pp. 136–46.
 29. Kenoyer, 'Wealth and Socio-economic Hierarchies', in *Order, Legitimacy and Wealth in Early States*, ed. by Richards and Van Buren, pp. 90–112.
 30. Leonardi, 'Moenjodaro' in *Interim Reports Vol. 3*, ed. by Jansen and Urban; M. Cucarzi, 'An Integrated Programme of Geophysical Prospectings at Moenjodaro (1983/1986)', *Prospezioni Archeologiche, Quaderni*, 1 (1990), 13–49; M. Cucarzi, 'Cemeteries, Huge Structures, Working Areas through Geophysical Investigations', in *South Asian Archaeology 1985*, ed. by K. Frifelt and P. Sørensen (London: Curzon Press, 1989), pp. 211–15.
 31. Lal, 'A Glimpse of the Social Stratification', in *Harappan Studies*, ed. by Possehl and Tosi, vol. 1, 63–71.
 32. M. Fentress, 'Resource Access, Exchange Systems and Regional Interaction in the Indus Valley: An Investigation of Archaeological Variability at Harappa and Mohenjo-Daro', PhD thesis, University microfilms (Ann Arbor: University of Pennsylvania, 1976).
 33. J. M. Kenoyer, 'Shell Working at Moenjo-Daro, Pakistan', in *South Asian Archaeology 1983*, ed. by J. Schotsmans and M. Taddei (Naples: Istituto Universitario Orientale, 1985), pp. 297–344; A. Ardeleanu-Jansen, U. Franke and M. Jansen, 'An Approach Towards the Replacement of Artefacts into the Architectural Context of the Great Bath', in *Dokumentation in der Archäologie*, ed. by Urban and Jansen, pp. 43–69.
 34. B. B. Lal, 'Some Reflections on the Structural Remains at Kalibangan', in *Frontiers of the Indus Civilization*, ed. by B. B. Lal and S. P. Gupta (Delhi: Books and Books, 1984), pp. 55–62.
 35. L. Bondioli, M. Tosi and M. Vidale, 'Craft Activity Areas and Surface Survey at Mohenjo-daro. Complementary Procedures for the Evaluation of a Restricted Site', in *Interim Reports*, ed. by Jansen and Urban, vol. 1, pp. 9–37; M. Vidale, 'On the Structure and the Relative Chronology of an Harappan Industrial Site', in *South Asian Archaeology 1987, Part 1*, ed. by M. Taddei and P. Callieri (Rome: Istituto Italiano per il Medio ed Estremo Oriente and Istituto Universitario Orientale, 1990), pp. 203–44; S. Pracchia, M. Tosi and M. Vidale, 'On the Type, Distribution and Extent of Craft Industries at Moenjodaro', in *South Asian Archaeology 1983*, ed. by Schotsmans and Taddei (Naples: Istituto Universitario Orientale, 1985), pp. 207–47.
 36. Bondioli, Tosi and Vidale, in *Interim Reports*, ed. by Jansen and Urban, vol. 1, pp. 9–37, fig. 9.
 37. H.-M. L. Miller, 'Reassessing the Urban Structure of Harappa: Evidence from Craft Production Distribution', in *South Asian Archaeology 1997*, ed. by M. Taddei and G. De Marco (Rome: ISIAO, 2000), pp. 207–47; H.-M. L. Miller, 'Associations and Ideologies in the Locations of Urban Craft Production at Harappa, Pakistan (Indus Civilization)', *Archaeological Papers of the American Anthropological Association*, 17 (2007), 37–51.
 38. Miller, 'Associations and Ideologies'.
 39. Kenoyer, 'Wealth and Socio-economic Hierarchies', in *Order, Legitimacy and Wealth in Early States*, ed. by Richards and Van Buren, pp. 90–112.
 40. J. M. Kenoyer, 'Harappan Craft Specialization and the Question of Urban Segregation and Stratification', *Eastern Anthropologist*, 45 (1992), 39–54.
 41. D. Miller, *Artifacts as Categories* (Cambridge: Cambridge University Press, 1985).
 42. D. Miller, 'Ideology and the Harappan Civilization', *Journal of Anthropological Archaeology*, 4 (1985), 34–71.

43. R. B. D. R. Sahni, 'HR Area (continued): Section B', in Marshall, pp. 187–213.
44. Marshall, p. 202.
45. Marshall, p. 22.
46. Lal, 'A Glimpse of the Social Stratification', in *Harappan Studies*, ed. by Possehl and Tosi, vol. 1, pp. 63–71 (p. 65).
47. Wheeler, pp. 32, 54–55.
48. W. A. Fairservis, Jr., *The Roots of Ancient India* (Chicago, IL: University of Chicago Press, 1975), p. 260.
49. Possehl, *The Indus Civilization*, p. 204.
50. Wheeler, p. 53; Possehl, *The Indus Civilization*, pp. 203–04.
51. Wheeler's opinion: see p. 53.
52. Sahni, 'HR Area (continued). Section B', in Marshall, p. 202.
53. An anonymous peer reviewer, at this point, warned me of the danger of creating, with my hypothetical 'Little Bath', another dangerous archaeological myth, and I agree that Indus archaeology is plagued by myths. But I see this rather as a hypothesis like others to be simply tested, in the future, with a small-scale excavation, followed by an immediate refilling of the trench. After all, digging is what archaeologists are supposed to do.
54. Wheeler, p. 26.
55. Marshall, p. 17, under the heading 'Three classes of buildings'.
56. Wheeler, p. 55.
57. Fairservis, Jr., p. 263.
58. Wheeler, p. 55.
59. E. J. H. Mackay, 'Architecture and Masonry', in Marshall, pp. 263–64.
60. See also Mackay, *The Indus Civilization*, pp. 31, 37–38.
61. Marshall, pp. 22, 62–63, 191.
62. Marshall, p. 61.
63. E. J. H. Mackay, 'Household Objects, Tools and Implements', in Marshall, pp. 456–80 (p. 474).
64. Marshall, p. 474, footnotes 1 and 2.
65. E. J. H. Mackay, *Further Excavations at Mohenjo-daro* (New Delhi: Government of India, 1938), pp. 595–97.
66. Mackay, *Further Excavations*, p. 596.
67. R. Law, 'Moving Mountains: The Trade and Transport of Rocks and Minerals within the Greater Indus Valley Region', in *Space and Spatial Analysis in Archaeology*, ed. by E. C. Robertson, J. D. Seibert, D. C. Fernandez and M. U. Zender (Calgary, AL: University of New Mexico Press, 2006), pp. 301–13.
68. Mackay, *Further Excavations*, p. 596.
69. Mackay, 'Architecture and Masonry', in Marshall, pp. 263–64 (p. 264).
70. See Marshall, pl. XXX.
71. L950, visible in Marshall, pl. XXXVIII, a and C, 1–3.
72. L898, in Marshall, pl. XCIX, 7–9. See A. Ardeleanu-Jansen, 'Stone Sculptures from Mohenjo-daro', in *Interim Reports*, ed. by Jansen and Urban, vol. 1, pp. 139–57.
73. M. S. Vats, *Excavations at Harappa* (Delhi: Government of India Press, 1940), p. 140.
74. G. F. Dales, 'Sex and Stone at Mohenjo-daro', in *Frontiers of the Indus Civilization*, ed. by Lal and Gupta, pp. 109–15; E. Maula, 'The Calendar Stones from Moenjo Daro', in *Interim Reports*, ed. by Jansen and Urban, vol. 1, pp. 159–70.
75. R. S. Bisht, 'Dholavira: New Horizons of the Indus Civilization', *Puratattva*, 20, (1989–90), 71–82, pl. IV.
76. Marshall, pl. CLVII, 62; Mackay, *Further Excavations*, pl. CIV, 31.
77. Possehl, *The Indus Civilization*, p. 69.
78. In the report, the description given for these astounding architectural elements is somehow approximate, and they are, as a matter of facts, still unpublished. I wonder if Marshall, whose competence in classical archaeology was highly reputed, had felt a certain embarrassment in discovering a 'proto-ionic' capital in an Indus building of the third millennium BC.
79. Vats, *Excavations at Harappa*, pl. XIV, 8.
80. Vats, *Excavations at Harappa*, pl. CXVII.
81. Some examples are in Marshall, pls. XIII, 9–12 and XIV, 6 and 8.
82. See for example Marshall, pl. CLVII, 10, 12, 56, 57; and Mackay, *Further Excavations*, pl. CXXXVI, 55–56, 62, 64–65.
83. M-1409 to M-1414 in S. G. M. Shah and A. Parpola, *Corpus of Indus Seals and Inscriptions. 2. Collections in Pakistan* (Helsinki: Suomalainen Tiedeakatemia, 1991), p. 190.
84. Vats, *Excavations at Harappa*, p. 140: the expression is copied from Marshall, p. 61.
85. Marshall, pl. CLVII, 10 and 12, both from houses of Block 3, HR-B; Vats, *Excavations at Harappa*, pl. CVII, 17.
86. Mackay, *Further Excavations*, p. 438, pl. CVI, 40.
87. A. K. Coomaraswamy, *Il Grande Brivido. Saggi di simbolica ed arte* (Milano: Adelphi, 1987), pp. 443–95 [*Selected Papers*, 1.1, 'Traditional Art and Symbolism' (Princeton, NJ: Rodger Lipsey: Books, 1987)]. Coomaraswamy compares Indus ring-stones (and prehistoric perforated stones in general) to the three perforated bricks placed on the fire altars of the Vedic tradition. These perforated (or self-perforated) bricks or stones were imagined as inserted on a spiritual axis. They would

symbolise an ascending movement from earth, across air, to sky, and thus through Agni, Vayu, Aditya. The Author also compares ring-stones to beads moving along the thread of a necklace, and to wheels revolving around a cart's chuckle. Coomaraswamy recognises these ritual objects in a sign encountered on punched mark coins (fig. 12a). He accepts the possibility that Indus

ring-stones were parts of composite columns, even – he writes – if this does not necessarily imply that columns in royal palaces were constructed in such a fashion (p. 476, footnote 20).

88. See C. C. Lamberg-Karlovsky, 'The Indus Civilization: The Case for Caste Formation', *Journal of East Asian Archaeology*, 1 (1999), 87–113.