Walking with the Unicorn

Social Organization and Material Culture in Ancient South Asia

Jonathan Mark Kenoyer Felicitation Volume

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Front cover: SEM microphotograph of Indus unicorn seal H95-2491 from Harappa (photograph by J. Mark Kenoyer © Harappa Archaeological Research Project).
Back cover, background: Pot from the Cemetery H Culture levels of Harappa with a hoard of beads and decorative objects (photograph by Toshihiko Kakima © Prof. Hideo Kondo and NHK promotions).
Back cover, box: Jonathan Mark Kenoyer excavating a unicorn seal found at Harappa (© Harappa Archaeological Research Project).

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The Sincerest Form of Flattery? Terracotta Seals as Evidence of Imitation and Agency in Bronze Age Middle Asia

Marta Ameri

Terracotta seals that reprise the iconography and shape of seals produced in more prestigious materials are found throughout Southern and Central Asia. They are particularly common at the 3rd and 2nd millennium BC sites of the Ahar Banas culture in southwestern Rajasthan. All the seals found at these sites were made of baked clay, contrasting sharply with the stone or metal seals made by the cultures that surrounded them. Yet the shape and iconography of the Ahar Banas seals often imitate those of stone and metal seals from neighboring regions, suggesting that these seals were in fact a local adaptation of a foreign technology. Nonetheless, the people of the Ahar Banas were not alone in making terracotta seals. A closer examination of the material from the area shows that the archaeological record, particularly in the periods before and after the Mature Harappan Period, is littered with what may be considered prestige items made in the least prestigious material available. This paper examines the clay seals found in Southern and Central Asia and Iran in the 3rd and 2nd millennia BC and contemplates the role that imitation and adaptation play in their production, as well as reconsidering the intrinsic value of the materials in which they are made and the role that technological styles play in defining local identities.

Keywords: Indus Civilization, Ahar Banas culture, Middle Asia, Bronze Age, Seals and sealings.

Seals played an important role in ancient societies, whether as markers of identity or as administrative tools. As objects, seals carry information both in their physical form and in the imagery they bear, while as tools of administration their functionality lies in the ways in which they are used to control access to and guarantee the integrity of specific products. The fact that the production of seals requires a specialized skill set, as well as the fact that they can be used to control access to resources, has led to the general belief that seals were owned by members of an elite or managerial class. The question of ownership becomes especially important when considering the materials from which seals were made. While the vast majority of the seals produced and used in ancient South Asia and the neighboring regions were made of stone, metal, shell, or bone – materials that required a significant technological investment – there is also a small subset of seals that were made of baked clay. Because many of these seals seem to imitate the form and iconography of seals made in more prestigious materials, it is important to examine them as elements in the larger framework of ancient seal production and use.

This paper focuses on placing the seals found at Ahar Banas culture sites in southwestern Rajasthan, which were made exclusively of baked clay, into the broader functional and stylistic context of 3rd and 2nd millennium BC terracotta seals. An overviews of terracotta seals found at contemporary sites in the region shows that these artifacts are found scattered at sites from Iran to the Indus Valley, but in contrast to the Ahar Banas seals, they are generally associated either with earlier stages of development or are created as copies of local seals made in other materials such as stone, bone, or metal. In almost all cases, the terracotta seals co-exist with seals made in other materials and seem to represent the lower end of the production spectrum. This paper contemplates the role that imitation and adaptation play in the production of terracotta seals, as well as reconsidering the intrinsic value of the materials in which they are made and the role that technological styles play in defining local identities, specifically in the case of the Ahar Banas. In addition, the following discussion will consider the different ways in which cultures in Southern and Central Asia and Iran used clay seals to either imitate luxury goods, to assert their cultural identity, or as elements of a less official system of sealing and administration.

The terracotta seals of the Ahar Banas

In January 2003, excavators working at Gilund, a 3rd to 2nd millennium BC Ahar Banas culture site located in the Indian province of Rajasthan, uncovered a cache of seal impressions whose designs strongly resembled those of seals known from Southeastern Iran and Central Asia. Further exploration at Gilund and a re-examination of material previously uncovered at the nearby sites of Ahar and Balathal, revealed more sealings as well as a number of terracotta seal amulets and stamp seals (Ameri 2010a; Ameri 2010b; Ameri 2014). The realization that seals and sealings were found not only at Gilund, but also at other sites of the Ahar Banas Complex helped place this culture within the sphere of Bronze Age cultures actively using seals as

part of what Frenez and Tosi (2005: 64) call the 'Trans-cultural Administrative Sealing System', a system of shared procedures within which seals are used to regulate the storage and exchange of goods.

Unlike the seals found at many other Bronze Age sites, which are generally made of bone, stone, metal, or clay, the seals found at Ahar Banas sites were produced exclusively of terracotta, raising the question of whether these administrative materials made of the most ordinary material possible could really be considered elite goods used within a system of economic control. Yet when viewed within the context of the overall material culture of the Ahar Banas, it becomes clear that these seals fit perfectly within the local technological tradition. This paper will argue that the production of seals in terracotta is a reflection of the technological style of the Ahar Banas and was in fact an intentional choice made by the people this region to assert their cultural identity while at the same time adopting seal shapes and iconographies that may have been foreign to them.

The terracotta seals found at Ahar Banas sites, most of which can be dated to the Late Ahar Banas period (*c.* 2000-1700 BC), can be divided into two basic functional types: 1) the seal amulets, which are flat and mostly round in shape, and 2) the stamps, which are distinguished by the fact that they have a knob or handle on the undecorated side. Both groups are decorated with carved intaglio designs and vary widely in decoration, though most of the designs are geometric.

In addition to these basic differences in shape and functionality, the seals themselves also suggest the existence of at least two distinct workshops involved in seal production. The first workshop (Figure 1), which, based on the available evidence, was most likely centered at the site of Ahar, just outside the present-day city of Udaipur, specialized in the production of very fine terracotta seals in distinctive shapes and with iconography that is not known from the local pottery. The technique used at this workshop produced seals that appear to be terracotta imitations of compartmented seals of the type generally made in stone or metal. The fine work of these seals can be seen in particular in the ways in which the designs were carefully carved out, most likely when the clay was almost at a 'leather hard' stage. The tool marks left by the craftsperson can be seen in some of the best-preserved seals (Figure 2).

The second 'workshop' (Figure 3), most likely a collection of less skilled producers working at individual sites (especially Gilund), made cruder seals that incorporate both designs found on the local pottery and others that are not (e.g., the bucrania motif found on Ameri 2010: S1.114 and S2.061). These seals are manufactured using

Figure 1. Finely worked seals ('non-local' group) from Ahar (photograph by M. Ameri).

Figure 2. Clay seal from Ahar with visible tool marks (photograph by M. Ameri).

coarser clay and a technique that uses simple incision, rather than careful carving, to create the design. A decentralized production model based on the existence of multiple workshops involved in the manufacture and exchange of products at different sites has also been documented in the fabrication of both pottery and terracotta bull figurines in the Ahar Banas (Misra *et al.* 1993). The fact that a similar pattern of production was used for the manufacture of seals further emphasizes how ingrained their use and production had become by the Late Ahar Banas period.

Upon completing this review of the local and non-local seal groups found at Gilund in particular and in the Ahar Banas in general, it remains striking that all the stamps and seal amulets found at Ahar Banas Culture sites, whether they belonged to the local or non-local tradition, were made of terracotta. This was probably

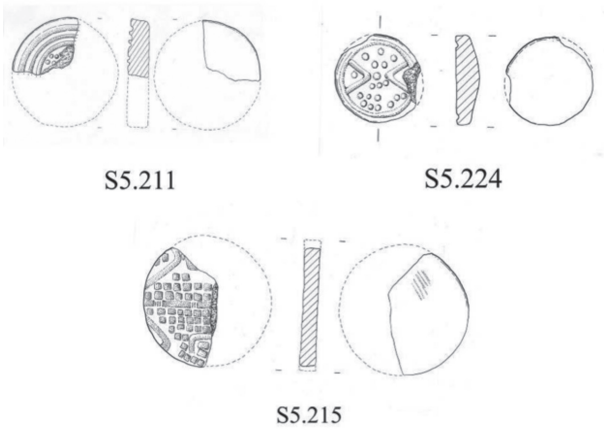

Figure 3. Coarsely worked seals ('local' group) from Gilund (drawings by J. Jarrett).

Figure 4. Sealings from Gilund (photograph by M. Ameri).

also true of the seals used to make the impressions found on the sealings that were found in the earlier levels of the site (Figure 4).[1] Although the impressions on many of the Gilund sealings were made by very fine seals and have significant iconographic similarities to compartmented metal seals found elsewhere, the thickness of the lines on these sealings makes it unlikely that the impressions were made by metal seals, which would have produced much finer lines and sharper details. This difference in the impressions made by seals made in different materials can be seen most clearly in a group of molded tablets found at Mohenjo-daro and identified by Asko Parpola as 'bilingual' artifacts. These tablets were impressed on one side by a stone seal with an inscription in the Harappan script and on the other by compartmented metal seal, in one case with a stepped cross motif and in the other with an motif of eagle heads (Parpola 2006). While it is possible that the seals used to make the impressions were made of stone, the fact that not a single stone seal has been found at any of the sites of the Ahar Banas makes this suggestion improbable.[2]

This assumption raises the possibility that both the seal amulets and the seals used to impress the Gilund sealings were imitations, produced in a less valuable material, of prestige objects known from elsewhere. The imitation of prestige objects in less prestigious materials is a phenomenon that is well known throughout the ancient (and modern) world. In the Indus, excavators have identified imitations in painted clay of both etched carnelian and long-barrel carnelian beads (Kenoyer 1998: 162). In Iran, clay imitations of carved chlorite vessels of the Intercultural Style were found at the site of Bampur, while copies made in bitumen were found at Susa (Lamberg-Karlovsky 1975: 355). The fact that imitating luxury materials and elite goods is common practice in antiquity suggests that such a practice would also not be out of place at sites like Ahar and Gilund or at any of the other sites where terracotta seals have been found.

Contemporary examples of terracotta seals

Terracotta seals were not uncommon in ancient Asia. While in general they tend to date to the earliest periods of seal production and are often roughly made, sophisticated examples from periods and areas where the production of stone or metal seals was common have also been identified. For the purposes of this paper, I have classed the terracotta seals found in 3rd to 2nd millennium Southern and Central Asia and Iran into three stylistic or conceptual classes: seals in a simple or crude style that can exist with or without the presence of seals in other materials, seals that imitate local style stone seals and seals that imitate compartmented seals in either stone or metal.

Simple terracotta style seals: Chanhu-daro and Pirak

Seals of the first group are often crudely made and generally date to the earliest periods of seal production or to periods after the florescence of urban society. Stylistically, they tend to resemble the seals of the 'local' group identified in the Ahar Banas corpus. In

[1] For a detailed overview of the dating of the seals and seal impressions from Gilund, see Ameri 2010b: 146–49 and Ameri 2015: 163–64.

[2] Scientific analyses of the clay of the Gilund sealings have not yet been performed, but a visual examination suggests that the fabric is similar to that of local clays, implying that the sealings were impressed locally. The discovery of a high quality compartmented terracotta seal in mid second millennium contexts at the Iranian site of Konar Sandal South (see below) also supports the hypothesis that these impressions could have been made by terracotta seals.

South Asia, seals in this group were found at Chanhu-daro and at Pirak (Mackay 1943: pl. L; Jarrige 1979: fig. 96), while in Iran several examples can be identified from Tepe Hissar (Bennett 1989; Schmidt 1937). At Chanhu-daro and Pirak, the terracotta seals can be dated to the Post-Urban Harappan or Jhukar periods (*c.* 1900-1700 BC). While these seals show relatively few iconographic links with the Ahar Banas seals, they do share important physical attributes. The seals from these two sites, which like the Ahar Banas seals date to the beginning of the 2nd millennium BC, are not only made of terracotta, but also share with the 'local' style seals of the Ahar Banas their coarsely incised designs and the use of both the seal-amulet and stamp forms. In her review of the foreign elements found in the Jhukar levels of Chanhu-daro, Heidi Miller (2008) concludes that the seals found at the site are not imported, but rather reflect a local tradition. The same can most likely be said for the seals from Pirak. The seals from these two sites, together with the 'local' style ones produced at Gilund and Ahar, reflect a regional adaptation of sealing technology (but not seal style or iconography) in the period after the decline of the Mature Harappan cities. This phenomenon appears to have existed throughout the area, and perhaps as far as the Gulf (Potts 2005).

Terracotta seals imitating stone seals: Tepe Hissar, Kalibangan, and Lothal

Terracotta seals that imitate seal types commonly made in other materials represent a special subset within this class of materials, one that reflects the intentional appropriation of the form and style of more elite artifacts. Seals of the second group tend to coexist with stone or metal seals and imitate the form and decoration of these more prestigious artifacts. The best examples of seals in this group come from the site of Tepe Hissar in northern Iran and from Lothal and Kalibangan in South Asia.

At Tepe Hissar, we can see that seals in terracotta imitate the form and incised designs found on both stone and copper/bronze seals. Seals like H 3776 (Schmidt 1937: 118, pl. XXVIII), a round terracotta stamp with a concentric circle design, for example, closely resemble H 4645 (Schmidt 1937: 55, pl. XV), a square stamp seal made of gypsum with a pierced knob and an incised concentric circle design. The sunburst design found on another terracotta seal, H 1785 (Schmidt 1937: 118, pl. XXVIII A), on the other hand, closely imitates the design found on a bronze seal, H3515 (Schmidt 1937: 199, fig. 118), although the clay seal cannot replicate the long thin handle of the copper artifact. The striking resemblance in shape and iconography between these clay seals and the examples in stone and bronze suggests that the artisans who created them were quite familiar with seals in all these materials.

In the Harappan world, significant numbers of clay seals have been documented at the sites of Lothal in Gujarat and at Kalibangan in Rajasthan. The clay seals here also take a variety of forms, from simple clay tablets (Joshi and Parpola 1987: L-95, L-96) to fully formed square seals with representations of animals and text on the face and knobs on the back (Joshi and Parpola 1987: L-41, K-39). While there are a few very simple seals among the terracotta examples from Lothal, what is most striking about the corpus is that even the ones with simple incised designs are on blank forms that imitate the shape of the well-known steatite seals from the site, whether classic square seals or bar seals. The most fascinating clay seal excavated at Kalibangan (Joshi and Parpola 1987: K-39; Lal *et al.* 2015: 504–508, no. 7, fig. 9.58) seems to have been made by impressing a stone seal with a figure of a rhinoceros onto a prepared square form with a pierced boss on the back. Unlike the standard Harappan square seals, this seal would have produced a negative, rather than a positive impression. It should also be noted that due to technical considerations, the bosses on many of these clay seals are higher and less finely modeled than those on the stone seals. The fact that these terracotta imitations of standard Harappan seals have thus far only been found at Lothal and Kalibangan supports the suggestion that Harappan seal production was in fact highly regulated and most likely centrally controlled, but also raises the question of whether seals at these two sites, which are among the few Harappan sites where large numbers of seal impressions were found, played a different role than they did at other sites in the Harappan world.[3]

Terracotta seals imitating metal compartmented seals: Lothal, Konar Sandal South, Damb Sadaat and Sarazm

In addition to the seals that imitate the traditional Harappan seal shapes, at least three of the terracotta seals from Lothal (Joshi and Parpola 1987: L-70, L-75, L-77) are simple square stamps with geometric designs that imitate the form and style of compartmented stamp seals carved in stone such as those found at sites like Mundigak in Baluchistan (Casal 1961: pl. XLV) and at Iranian sites like Shahr-i Sokhta (Tusa 1977). These seals may be placed in the third category of terracotta seals; those that imitate compartmented seals.

Compartmented seals made of terracotta are extremely rare. In this paper, I have grouped them separately

[3] In their study of the sealings from Lothal, Tosi and Frenez (2005) have suggested that the paucity of extant sealings at Harappan sites indicated that seals in the Indus Valley served a different function or were used in different ways than in much of the rest of the ancient world. Following on this logic, I would argue that the fact that a far greater number of sealings were found at Lothal and Kalibangan than at any other Harappan site, together with the discovery of a large number of terracotta seals at these sites, may point to a different use of seals at these two sites than elsewhere in the Harappan world.

from other terracotta seals largely because their form and iconography does not always reflect that of other locally produced seals. The seals of this group found at Ahar and Gilund are extraordinary in the quality of their manufacture. A review of the published material shows that only a terracotta seal found in a mid-3rd millennium context at Konar Sandal South (KSS) demonstrates a similar style. Holly Pittman (2013: 67–71) believes that the strong stylistic similarity between this seal and the examples from Gilund and Ahar, as well as the presence of a number of other imported seals at KSS, suggests that this seal was in fact first produced in the Ahar Banas and then transported to southwestern Iran, either by a local Jiroft merchant or by a trader coming from South Asia. Both the documented existence of mid-3rd millennium trade networks across Middle Asia and the iconographic links between the Ahar Banas and the Iranian plateau (Ameri 2010a, 2016) support the idea of contact between these two areas.

The similarities between the seal from KSS and those found in the Ahar Banas are truly striking, and from photographs there seems to be little doubt that the seals were produced using the same technique. Yet the fact that the seal from KSS is securely dated to the middle of the 3rd millennium (Pittman 2013) while the examples from Gilund and Ahar belong to the beginning of the second (Ameri 2013) does raise some important questions, as does the fact that the seal from KSS has a small loop handle on the back, while the comparable seals from the Ahar Banas are either pierced or have no suspension mechanism. These issues can be somewhat but not fully assuaged by the iconographic similarities between the seal from KSS and the mid-3rd millennium impressions from Gilund (Figure 3) (see Ameri 2010b: 106–27), but further evidence is needed to provide a definitive source for this seal.

Two further examples of terracotta seals that imitate either metal or stone compartmented seals were found in levels two and three at Damb Sadaat (Fairservis 1956: 229, figures 23a-b). These two seals imitate the carving found on some of the more complex large flat stone seals excavated at contemporary sites like Shahr i-Sokhta (Tusa 1977) and Mundigak (Casal 1961: pl. XLV), but are also reminiscent of designs found on the local Quetta ware pottery. A terracotta stamp found at Sarazm (Isakov 1994: figure 8, no. 1) in the Panjakent district of northwestern Tadjikistan also belongs to this group, though its carving is a significantly coarser. The excavators of the site recognized the unusual nature of the find and noted that the seal had 'no direct analogies among Bronze age finds in Central Asia and adjoining regions'. Like the seals from the Sites of the Ahar Banas, the terracotta seal found at Sarazm also lacks a knob or handle that would allowed it to be hung from a string (Isakov 1994: 8).

Conclusions. The transfer of ideas and technologies

At Gilund and in the Ahar Banas, the adoption of sealing technology occurs on three levels. On the one hand, there is the adoption of the administrative system in which seals are used. This system, which I have described elsewhere (Ameri 2010b: 182–85), involves the use of seals to guarantee the integrity of products or documents, as well as the possible storage of discarded sealings as a record of a transaction that has taken place. The second level of appropriation can be identified in the adoption of non-local iconographic elements such as the stepped cross or flower motifs found in many of the seals (see Ameri 2010a).

The third level of appropriation involves the adoption of the technology of seal production. Techniques of seal production, particularly in terms of materials and shapes, varied greatly throughout the ancient world. Stone seals were widely used, but they were cylindrical in Mesopotamia, square in the Harappan world, and round in the Gulf. Copper and bronze seals, on the other hand, are usually distinctive of Central Asia and parts of Iran. The Ahar Banas, where seals were typically made of terracotta rather than stone or metal, is no different from these other regions in that the seals produced here are also distinctive to their place of production. These differences in the material and shape of seals in many ways function as simple visual cues as to the identity of the bearer while also representing the technological style of the culture that produced them (Lamberg-Kalovsky 1975: 362; Lechtman 1979).

The fact that imitating luxury materials and elite goods is common practice in antiquity suggests that the shape and iconography of the Gilund seals also may have been meant to emulate elite goods known from elsewhere. On the other hand, the production of seals in terracotta fits perfectly within the fundamental technological style of the Ahar Banas: A brief overview of the material culture of the Ahar Banas demonstrates that, although the sites were located quite close to the copper sources of the Aravalli mountains, and there is some evidence that the people of the Ahar Banas were involved in the extraction and trade of this metal, most of the everyday objects used at the sites themselves were made of baked clay rather than copper or even stone. While the technological profile of the Harappans is defined by their constant desire to change the physical properties of materials, the people of the Ahar Banas Culture are characterized by their tendency to use clay to form desired cultural materials. This can be seen in everything from the figurines to the small finds, which include the seals and amulets as well as small incense burners and tanks that in other cultures would have been made of stone (see Hanlon 2014 for a full accounting of the small finds from Gilund). Thus, in spite of the fact that stone seals found in northern

Rajasthan and Haryana were most likely the inspiration for the Ahar Banas clay seals (Ameri 2016), it seems that once sealing technology was fully adopted into the Ahar Banas, even the seals belonging to elite members of the society would have been made of terracotta. In this sense, the seals found at Gilund seem to conform to Heather Lechtman's (1979) concept of a technological style that is unique to the culture. The link between the adoption of new technologies and existing ideologies discussed by Rita Wright (1993) is also an important aspect of this process. While the technology of sealing and the iconography of many of the seals are foreign, the material for producing the seals themselves remains a local one. This choice allowed the people of the Ahar Banas to assert ownership over an artifact class, which, though useful, was intrinsically foreign to their material culture. This adaptation of an adopted technology to the local technological profile, paired with the surprising lack of contemporary Harappan material at Ahar Banas sites, may be seen as an attempt by a smaller local society to claim independence and agency in the face of overwhelming change on a global level.

Yet, in contrast to the strong local character of the material used to produce the local style terracotta seals, both in the Ahar Banas and at other sites such as Pirak and Chanhu-daro, the technique used to produce the seals from the Ahar workshop, as well as the other examples of terracotta compartmented seals (though in the case of the latter the determination can only be made from photographs or drawings), takes a significantly different approach to the material, focusing on carving out the negative spaces rather than merely incising designs. In fact, the technique used to produce the terracotta compartmented seals seems rather to resemble the carving style used to produce stone seals of the same type (Figure 2). This phenomenon of using similar techniques to produce parallel artifacts in different materials is seen not only in the Ahar workshop seals, but also among the seals found at Tepe Hissar in northern Iran.

As discussed above, the terracotta seals excavated at Tepe Hissar (Bennett 1989; Schmidt 1937) can also be divided into two groups, a larger group whose decoration seems to consist of crudely incised lines and a smaller group with more carefully carved designs that resemble the motifs found on stone and metal seals. In contrast to the excavations at Ahar Banas sites however, the excavations at Tepe Hissar also brought to light numerous examples of stone and copper/bronze seals which co-existed with the examples made in terracotta. Further comparison of these two sets of seals, both in terms of their bezel design and their general shape (see above), makes the resemblance between them abundantly clear and suggests that the terracotta seals of the second group were in fact produced specifically to imitate the stone seals, and in some cases the even the more prestigious copper seals. In the Ahar Banas, on the other hand, artisans used techniques that resemble those used to carve stone to produce clay seals with foreign iconographies in the absence of a tradition of stone or metal seal production. This appropriation of a specific production technique without the concurrent adoption of the material for which the technique was intended further emphasizes the fact that the manufacture of seals solely in terracotta was a deliberate technological choice made by the people of the Ahar Banas.

Beyond the Ahar Banas, the clay seals from Tepe Hissar (Bennett 1989; Schmidt 1937) help to shed light on the different processes of imitation and adaptation that led to the creation and use of clay seals in the ancient world. While the terracotta seals of the Ahar Banas seem to exist independently as an artifact class in their own right, the clay seals at sites like Tepe Hissar or Lothal are clearly copies used in conjunction with extant seal types, creating a second tier of prestige artifacts that are visually similar but physically different from the originals. Yet even at Tepe Hissar, as at Ahar and Gilund, there is a separate group of poorly made local style terracotta seals which do not emulate the designs of the stone seals. This suggests that at some sites, lower quality clay seals could play an important role even if stone seals (or higher quality clay seals) were available and in use. It remains uncertain, however, if these seals played a role in local administration. The analysis of the sealings from Gilund suggests that local style seals were not used for administrative sealing in the area around the large parallel wall structure, though it is possible that they were used in other parts of the site, whether in association with more domestic or more industrial structures. Evidence as to whether or how these local style seals were used for sealing is also lacking from Tepe Hissar and other sites where they were found, but the fact that seals of this type were made over such a vast geographic area suggests that they too must have played an important role in the local traditions of seal use, a topic which is ripe for further exploration.

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