

Image and reality: Ceramics on Angkorian temple reliefs in Cambodia

AEDEEN CREMIN

This paper gives an overview of recent work on ceramics at Angkor. It discusses the way ceramics are shown on temple reliefs of the twelfth and thirteenth centuries CE and relates their realistic presentation to royal propaganda. It then goes on to consider Chinese export wares and suggests that these were an ancillary part of more significant trade in cavalry horses.

Long before Graham Connah became a household name in Australian historical archaeology, he was a household name in European prehistoric archaeology. In 1962, when he was at the Department of Geophysics in Cambridge, he co-authored a remarkable article on 'Remanent magnetism and Beaker chronology' with David Clarke, then a research student at Peterhouse (Clarke and Connah 1962). This was the first step in the more systematic approach to archaeological data which culminated in Clarke's *Analytical Archaeology* of 1968. The 'Remanent magnetism' project was inconclusive. In hindsight the sample was perhaps inappropriate, but it is still an interesting study of one of western Europe's better known prehistoric artefacts; it had a profound effect on my generation of students. It is therefore with a sense of fitness that I offer Graham a paper which incorporates findings from magnetism studies, though applied to stone rather than ceramics. This is small thanks for his remarkable contribution to historical archaeology in this country, for his rigorous approach to data-gathering and publication and for his dedication to this journal, which he founded and edited with typical professionalism from 1983 to 1988. These thanks warmly include Beryl Connah who has been a true partner in life and in work, gracefully shouldering many of the more mundane tasks of managing excavations and publications.

This paper, largely based on Australian fieldwork of 2000–2007, describes the present state of Angkorian ceramic studies and where they might fit into current debates on broad historical issues such as foreign policy and the religious practices of individual monarchs. The most recent work is presented in *Bayon: New Perspectives* (Clark 2007) and in its critique by the original editor Michael Vickery (2006 [2008]).

Cambodia in the twenty-first century faces many challenges: having recovered from the US-backed civil war of 1970–1975, the devastating Democratic Kampuchea regime (1975–1978) and the Vietnamese 'liberation' of 1979–1989, the nation is currently battling the interrelated evils of poverty and corruption. It is now actively promoting cultural tourism as a source of foreign revenue. As a result, many Australians have visited Angkor, capital of the Khmer Empire between the ninth and fifteenth centuries CE, and are familiar with the major monuments, though they may not realise that there are literally dozens more of comparable size and value, scattered throughout the region and further afield in Laos and Thailand. These sites are of crucial significance to the Cambodians, as can be seen from the ongoing disputes over Preah Vihear, on the border with Thailand, and archaeology is therefore of considerable importance.

Democratic Kampuchea killed most of Cambodia's scholars, wiped out monastic libraries and destroyed the cultural institutions established under the French Protectorate (1863–1954). Archaeological archives were burnt; ceramics were ground underfoot and bronzes destroyed. Stone artefacts

fared somewhat better but many that escaped destruction were removed by looting on a truly impressive scale (Nagashima 2002:104–108). Many temples were land-mined between 1974 and 1992 and it is only in the past couple of years that the major complexes at Banteay Chhmar, Beng Mealea, Koh Ker, the Kulen, Preah Khan of Kompong Svay and Preah Vihear have been made safe for public access. As de-mining progresses, agricultural land is being made available for displaced persons who may also reap some benefits from the tourist boom.

After the Paris Peace Agreements of 1991 the plight of Cambodian archaeology brought a generous response from foreign institutions: the French government continues to fund the *École Française d'Extrême Orient* (EFEO); the Japanese government created a specially-funded organisation for UNESCO, the Japanese Government Team for Safeguarding Angkor (JSA), which has done major work on the Bayon temple since 1994; there are or have been teams from China, Germany, Indonesia, India, Italy, Switzerland and Thailand, while generous individuals support Heritage Watch, the Centre for Khmer Studies and the Cambodian programs of the World Monuments Fund. Outside the Angkor region, the University of Hawai'i-Manoa is doing major work in the Mekong Delta (Stark 2006).

Australian scholars have been privileged to take part in the rebuilding of scholarship, through the Greater Angkor Project (GAP), devised by Prof Roland Fletcher of the University of Sydney with his French counterpart Dr Christophe Pottier, Director of EFEO in Siem Reap, in collaboration with the Cambodian heritage authority APSARA. The GAP project has already produced three doctoral theses with seven more in progress: there are currently three postdoctoral fellowships, an international fellowship and a visiting professorship. My own part has been to analyse the ceramics from the GAP surveys and excavations.

When we started work there were no reference collections, but there was one very thorough publication on ceramics, *Udaya I* (2001) co-edited by Ang Chouléan, one of those few Cambodian scholars who survived the massacre because they were studying abroad. In Khmer, English and French it summarised previous publications and gave a detailed account of ceramics recovered since 1994 during conservation work and from the ongoing excavations at the Royal Palace. In addition there were several older books with good illustrations of Khmer ceramics in museums and private collections (Brown 1981, 1989; Cort 2000; Rooney 1984, 1990) and we quickly found that the ceramic repertoire from the GAP projects conformed to well-known types. Thus we could easily divide our material into four main categories, low-fired domestic earthenwares, high-fired unglazed stonewares, high-fired glazed stonewares and imported Chinese porcellaneous wares.

The last French Conservator of Angkor, Bernard-Philippe Groslier – whose untimely death in 1986 deprived Cambodia of a truly great scholar – had established a ceramics chronology, based primarily on material found in the course of conservation work on various monuments (1954–1974), supplemented by ceramics from his 1968 excavation near Srah Srang, the only stratified site known at that time, and still the only cemetery at Angkor (Courbin 1988; Groslier 1981a, 1981b). Though Groslier’s chronology was not sufficiently precise for our needs, we were pleased to find that our results and those of our colleagues generally confirmed the accuracy of his observations (Cremin 2006). As time went by we were also able to learn from the increasing collections made separately by APSARA and by the Japanese and French teams.

Nowadays Cambodian archaeology is functioning spectacularly well: the APSARA teams have done remarkable work and have discovered many hitherto unknown sites, most interestingly from our point of view a series of kilns which demonstrate that pottery-making was highly specialised, with different products made in each regional kiln (Ea 2007; Nara 2001, see also Hendrickson 2007). EFEO has greatly enlarged the regional corpus of ceramics through its excavations in the West Baray and around Roluos, and the French salvage team INRAP has set new standards in the recording of unglazed wares at Trapeang Thlok through the work of the Gallo-Roman specialist Armand Debas (Bâty and Bolle 2005; INRAP 2004). The Japanese teams have excavated kilns at Tani and the Kulen and done several excavations within Angkor Thom, including outer parts of the Bayon (JSA 2005). There is now a good deal of expertise and a museum has finally opened at Angkor.

Our ceramics interests differ from those of most other teams since we take particular note of the domestic earthenwares, which are generally considered to be of little account. Groslier would be shocked to discover that we pay relatively little attention to the abundant Chinese material; we consider that Chinese material is well studied by many others. A trip to Fujian province, China, to check on the products of the Dehua and other kilns confirmed that Chinese ceramics from the GAP excavations and surveys are of standard export types and add little to what is already known, except to make the point that Chinese wares were commonplace, at least in the twelfth century if not earlier. Their value in the later thirteenth century is well known from the record of Zhou Daguan’s commercial embassy: ‘Most appreciated here are Chinese gold and silver and then light-mottled double-thread silks. After them come tin goods from Zhenszhu, lacquered trays from Wenzhu, green porcelain from Quanzhou and Chuzhu’ (section 21, Smithies 2001:42). The ongoing interest in these objects is visible in the 1380s gift from the Ming emperor to Champa of ‘32 bolts of fine silk interwoven with gold thread and 9,000 pieces of porcelain’ (Wade 2003:6).

We have observed the use of ceramic cooking wares in daily life and their manufacture in the ceramics district of Kompong Chhnang, literally the ‘cooking-pot district’. We have been particularly interested in the cooking pot supports from the open brasiers which are used throughout Southeast Asia. In Cambodia today there are two shapes: the ‘Chinese oven’ is a heavy tronconical vessel with side aperture which uses charcoal, while the ‘Siamese oven’ is a lighter violin-shaped vessel which can be fed with wood as well as charcoal and will hold two pots at a time. In either case the pots sit on horizontal projections which are today quite thick, but in the past were quite thin. They are roughly triangular in shape and the Vietnamese name ‘pig’s tongue’ is a good description (Figures 1–4).

Pot-supports are recorded as early as the second



Figure 1: Earthenware pot-support of ‘pig’s tongue’ shape, from the GAP excavations at Tumnup Barang, Angkor.

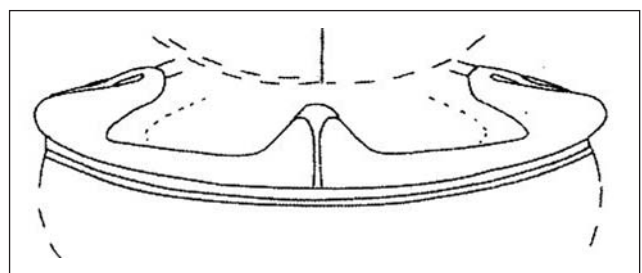


Figure 2: Position of the ‘pig’s tongue’ pot-support on a brasier; drawing by Marc Franiatte (reproduced from Franiatte 2001: fig. 31).

millennium BCE from Sabah, Malaysia (Chia 2003:192). In South Vietnam they have been found in the upper part of Tra Kieu Phase 2, a second to sixth century CE site, probably Cham, (Prior and Glover 2003:282), and at Oc Éo from deep as well as surface levels (Malleret 1960:145–151). Guérin found four fragments in her re-examination of the finds from Groslier’s excavations at Prei Khmeng and Sambor Prei Kuk, dating any time between the second and thirteenth centuries (Guérin 2002:19). At Angkor they are known from the Royal Palace at Angkor (Franiatte 2001:112) and at our site of Tumnup Barang. They litter the ground at the GAP-recorded site of Veal Kokpnuov, near Srah Srang, in such abundance that I am inclined to consider that this was a market-place where brasiers were sold, or used for cooking, or both. They are not mentioned in any of the kiln-excavation reports to date, but that is hardly surprising for they are typically hand-made objects baked on village bonfires.



Figure 3: Modern brasiers with cooking pots, Kompong Chhnang (Jane Calthorpe 2006).



Figure 4: *Brasiers in use by the Khmer army, as shown on a Bayon bas-relief (outer gallery).*

Brasiers figure prominently on the scenes of daily life shown in bas-relief on the outer galleries of Banteay Chhmar and the Bayon (e.g. Jacques and Freeman 1997:260; Jacques and Freeman 2003:86; Smithies 2001:32, 42, 82). The Bayon is a three-level temple in the heart of the city of Angkor Thom; it has over 50 towers, the central one of which was built around a giant statue of the Buddha on a coiled naga serpent (Dumarçay 1967 and 1973); Banteay Chhmar is a much smaller monument on one level only, in the frontier province of Banteay Mancheay (Jacques and Lafond 2007). Both of these temples were built by Jayavarman VII who stabilised and extended the Khmer Empire during his long reign (1182–c 1218). Magnetic studies, by JSA and Olivier Cunin have been able to correlate building-stones with different quarries and quarrying events: this does not establish a sequence but indicates how the building operations were planned, through the volume of stone extracted (Cunin 2007). An important finding is that the Bayon's central sanctuary was planned as one entity and is therefore not the series of accretions that has been suggested in the past (e.g. by Dumarçay 1973). I consider that the iconographic program was also planned from the start, perhaps not in every detail, but at least as a broad concept.

For our purposes one indisputable point is relevant: that Jayavarman VII sought to extend the benefits of his rule to all parts of Cambodian society, building hospitals and creating imagery which is certainly inclusive. Many of his buildings have 'face-towers' with calmly beautiful faces on each of their four sides, representing an all-seeing deity, or king, or Buddha (Roveda 2007; Sharrock 2007). Banteay Chhmar had a specific imagery of hospital scenes and no less than eight enormous panels of Lokeshvara, the bodhisattva of

compassion (Groslier 1973:175; Jacques and Lafond 2007:254–255; Park 2005:329). The imagery of the Bayon is more complex and not yet fully understood; however, all authors agree that there is a sequence which goes from secular themes at the ground, or public level, through a mixture of secular and religious imagery in the second level, to religious only at the upper levels.

In my view, the imagery of the two lower levels – those accessible to the lesser orders – is intended to bring the ordinary people into the sphere of the divine by blending them into the imagery of the king and deities. The images of daily life relate to the viewer's 'here and now'. Elsewhere in south Asia such details would normally be shown as part of the Ramayana story or within a *jataka* or story of the Buddha. But Jayavarman VII seems to have deliberately aimed at realism: the life of the people is shown very simply and with humour. On the first level, or outer gallery of the Bayon, men, women and children eat, drink, watch performances, play games and haggle on the lowest register of three, with lordly and royal scenes on the upper registers, reflecting the accepted hierarchy of Cambodian society.

One scene shows the manufacture of ceramics. It occupies a recess (SW) in the south-eastern corner of the outer gallery and is in two registers, the upper register showing a senior person sitting inside a curtained building, with attendants. The lower register contains two related scenes, in which cookpots and stewpots are shown being made and packed for transportation. Reading from left to right, the first scene shows four men around an area where the foreground is of footed bowls and flames: the two larger ones at the right, towards the centre of the panel, are talking to or observing the two on the left who appear to be working: the man at the extreme left is holding a spherical object, which could be a round-bottomed cooking pot; beside him is a man who holds a similar object and stands behind coils (of clay?); the flames may be coming from the footed bowls or from behind them. Above the scene, hanging from a horizontal beam, is a cross-hatched basketry container (Figures 5–7).



Figure 5: *Relief of ceramics manufacture, whole panel, with senior person and attendants above (Luke Benbow 2008).*



Figure 6: Relief of ceramics manufacture, lower register, left-hand panel.

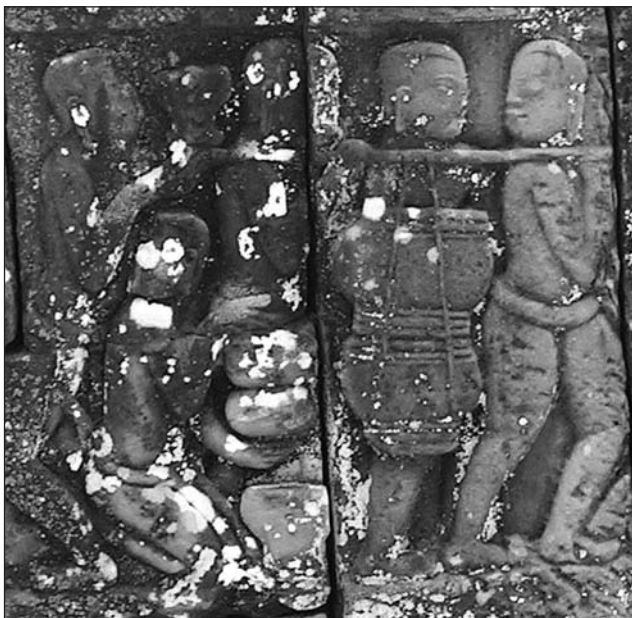


Figure 7: Relief of ceramics manufacture, lower register, right-hand panel.

I think that this scene shows the making of earthenware pots and their burning in a bonfire kiln, at the moment before the flames start to consume the straw fuel – as can be observed today in Kompong Chhnang and elsewhere (illustrated in e.g. Shippen 2005). That both panels refer to the same place is indicated by the container hanging from the beam which is also the floor of the upper space. While it might seem that the burning is directly beneath the building, it would in fact be in front of it according to Angkorian perspective, as seen, for instance, in the outer gallery where riverbank scenes are shown directly below boats in the water. In modern villages bonfire-burning is carried out right beside the dwellings, alongside the garden area.

Overlapping this scene is a similar scene directed towards the right, with one man facing and apparently supervising a group of three men on his right: one is kneeling and stacking two round-bottomed cooking pots onto a footed wide-mouthed bowl. Behind him and moving right are two men holding a pole at shoulder height, from which hangs a stacked pair of larger pots (stewpots), secured by cord slings. These

pots appear to be separated by basketry rings; they do not have lids. In the centre background a fifth man may be assisting the carriers or may be another supervisor: between them is a footed pot, which the main supervisor may be holding at head-height, or more likely it is hanging from the beam as a counterpart to the basketry container in the left-hand half of the scene. This activity may be taking place beneath the dwelling, but could equally well be thought of as happening in the outer compound.

This scene of ceramics manufacture can be viewed as complementary to the two other occupational scenes, one of building (outer gallery W, S section, shown in Giteau 1976:

ill. 91; Jacques and Freeman 2003:91) and the other of stone-cutting (inner gallery W, S section no. 14, Jacques and Freeman 2003:97). Each of these depictions shows an accomplished sense of observation on the part of the artists and carvers. From a design point of view these vignettes may have been intended simply as ‘fillers’ occupying an empty narrative space, perhaps marking a pause between the various episodes depicted in both outer and inner galleries, but the psychological effect, as with the market scenes, is to bring us closer to the people who actually built the Bayon and lived within its ambit.

The second-level or inner gallery also shows ordinary people, though apparently mostly engaged in religious activities, worshipping or walking to shrines. They carry well-known ceramic vessels: jars, ‘baluster’ and ‘pedestal’ vases. Some are transported in looped string holders or carried on people’s heads (inner gallery N, W section); a similar image is shown on Jayavarman VII’s Neak Pean (upper W pediment of N chapel, Jacques and Freeman 2003:180). Such pots are known from recent excavations and also from Groslier’s work at Srah Srang (Courbin 1988: fig. 27). We know that they could have ritual importance, for the Bayon’s Vishnu-worship scene (inner gallery S, W section) shows straight-sided jars with domed lids, while a baluster vase represents the *amrita* flask on the Churning of the Ocean of Milk (inner gallery W, N section, Freeman and Jacques 2003:99) (Figure 8). Bodhisattva relief II at Banteay Chhmar has pedestal vases (Jacques and Lafond 2007:254) standing on tripods which were probably made of bronze, similar to that published by Bunker and Latchford (2004:385).

The Bayon shows a rich panoply of other containers, most of them not in ceramic. Lightweight basketry containers are shown carried on people’s head or hung from rafters. On the second level (inner gallery S, W section), a palace scene shows on the lower register a storage area where a servant half-opens a large container which may have a hinged lid; another servant is slumped asleep over a closed version of the same container, its domed top suggesting it is made of bamboo. On the upper register, near the entrance of the hall, a seated lord is presented by a servant with food (?) piled up in a wide-mouthed, footed vessel with horizontal ribs. A servant holding a similar vessel, piled up with another substance, is shown at the left, inside the hall. Ceramics in these forms are not commonly found in excavations, but at Srah Srang, in the mid eleventh century level, Groslier found a ‘fruit-presentation bowl imitating basketry, hard light-grey paste with thick green glaze, height 14 cm’ (Mourer 1986: pl. 34



Figure 8: Baluster vase holding the amrita liquor of immortality, on a Bayon bas-relief (inner gallery W).

fig. 3). The diameter seems from the drawing to be about 27 cm and this pot would therefore be about the same size as the serving vessels described above.

Maxwell (2007) and Ang (2007) each stress the originality of Khmer religious belief and imagery. We have already noted the distinctive interest in apparently contemporary scenes, but to test originality further I compared Khmer representations of ritual ceramics with those from Borobudur and other Javanese temples. Detailed images are accessible in Australia through the magnificent Coffin Collection of black and white photographs in the National Library of Australia. It immediately became clear that there was a marked contrast in the representation of ritual vessels, specifically the *purna ghata*, the spherical Indian flower-vase decorated with a sash around the belly (Al-George and Rous 1957). This is a very common decorative theme in ninth and tenth-century Java, where it can be further associated with birds, conches, and lotus. There is one possibly sixth-century Cham relief from Da Nang, now in the Da Nang museum, Vietnam, where a square block with *purna ghata* relief was reused as a column base (Musée Guimet 2005). However, there are no *purna ghatas* on Khmer temples (Gairola 1954:222).

Was the *purna ghata* considered old-fashioned in the Angkorian period? Or was it not in use? The answer can be

found in Saveros Pou's analysis of flowers in Khmer literature: in a discussion of ritual she indicates that floral offerings were highly significant and that the vocabulary indicates the use of 'garlands' or 'arrangements' (2005: 52–54); there is no mention of vases or containers. The implication is that Khmer ritual did not adopt the use of *purna ghata* and was in that respect not 'indianised'. In a small way this supports Maxwell's (2007) contention that the Khmer integrated only some Indian forms into their own religious practice rather than adopting a whole pre-fabricated system.

In contrast to the *purna ghata* a great deal of attention is paid to another foreign form, the *kendi*: this is a spouted ewer or pouring-vessel, manufactured in China specifically for export. *Kendi* get distinctive treatment at the Bayon: they are carried respectfully or placed on a stand (outer gallery, SE corner, Smithies 2001:46); one is shown as an ablutions-pourer in the worship of Shiva (inner gallery S, W section). A *kendi* is also shown beside the Bodhisattva relief VII at Banteay Chhmar (visible in 1970s photo, with relief still in situ, Coffin Collection). This treatment contrasts with Javanese imagery, where *kendi* are rarely shown: at Borobudur a *kendi* is not used for pouring but to hold a flower (relief IIA80).

From these instances we can accept that other images may be realistic and we can extend our enquiry into the representation of what may be foreign usages or behaviour. As is now well-known, Jayavarman VII had close links to Champa, where he seems to have lived and campaigned; he later had Cham princes at his court and sought to maintain diplomatic relations with Champa (Schweyer 2007). The Cham, conventionally identified by flowery helmets, when not shown as enemies, are shown as musicians or ordinary troops with Khmer officers. The Bayon inner gallery has a narrative scene of a water-festivity with people in hierarchical order: Cham men are on a boat, with a Khmer lord in the adjacent boat to the onlooker's right and a Khmer king to the right again (inner gallery N, W section). The Cham are drinking through straws from narrow-neck bottles. Similar bottles are shown in use by Chinese people at Angkor Wat (Dvaravati festival, SW corner, Roveda n.d. [2003]: fig. 107) and on the Bayon (outer gallery S, E section). One might conjecture that drinking at festivals was a foreign custom and showing bottles reinforces that these are foreign dignitaries; in much the same way as a modern Cambodian might choose to show a westerner drinking coffee.

In addition to diplomatic alliances, Khmer kings would have had to negotiate with the Cham for horses. The Cham bought them from Annam (Wade 2009: sections 6 and 7). 'Annam', the land of the Dai Viet, now northern Vietnam, had been obtaining horses from Yunnan, in south-western China, from at least the third century CE (Yang 2004), probably bringing them along the Red River route which continued in use into modern days. Cavalry is well represented at Angkor Wat and it is known that its builder Suryavarman II (1113-c. 1150) had campaigned in Annam. Systematic horse-trading, as opposed to occasional looting, is a large undertaking, for along with horses come their attendants, grooms and riders, as we know from the better-documented Central Asian horse trade of the Tang and later periods. It is relevant that the Bayon shows not only cavalry but also a Chinese horseman (outer gallery E, Jacques and Freeman 1997:264) and that polo-playing on horseback is depicted on the Elephant Terrace (Jacques and Freeman 1997:268).

As well as the overland horse trade, the Cham controlled the maritime trade between Java and China: Cham ports, whether 'Vijaya' or others, were the main points of entry for Chinese goods. From at least the ninth century CE Chinese trade-goods invariably included ceramic containers. In 1981

Groslier postulated the existence of such a trade as the model for Angkorian glazing and manufacturing techniques and this has now been confirmed at Prei Monti, at Roluos, where Christophe Pottier has found ninth to tenth-century Tang wares (pers. comm. 2007). When Groslier wrote, few kilns were known from Cambodia and Chinese kilns were not adequately published. The situation is now much improved (Needham 2004) and enough work has been done in Cambodia to suggest that the Khmer borrowed not so much specific techniques but rather the ideas of wheel-turning, glazing and high-temperatures firing in kilns. All of these innovations were employed at the Kulen to produce its well-known ash-glazed tiles, finials, lids and heavy-rimmed bottles.

In the tenth-century level of the Srah Srang burial site Groslier found a bottle of similar form to those depicted on the Bayon and Angkor Wat reliefs and described it as an 'imitation of a Chinese *hu*-bottle, dull red paste with polished *lie-de-vin* [purple] slip, height 13.4 cm' (illustrated by Mourer 1986: pl. 30 fig. 2). He considered that the *hu*-bottle was the model for the Kulen bottles. Such bottles were also produced at the Tani kilns (Nara 2005: pls 18, 34–35), as were boxes of Chinese type, both ash-glazed and unglazed (Nara 2005: pls 14, 16–17, 31–33). Ash-glazing requires only suitable fuel (Ly and Muan 2000: Glazing), and the fact that the Tani potters used it so little suggests that glazing may have been of minor importance to the consumer. Unglazed Kulen-type bottles were also found at Trapeang Thlok, where they would be of tenth/eleventh century date, thus fitting in with Groslier's chronology.

Another vessel form which may be of ultimately Chinese origin is the distinctively Cambodian water-pourer, the *kaam*. This vessel is always unglazed; it has a horizontally-flanged rim, an everted neck, a distinctively shaped shoulder and a carinated belly. The decoration is of moulded ridging on the shoulder with lesser moulding around the carination (Figure 9). The shape is perfectly designed for graceful pouring without the use of a spout and we have been shown how the slight swelling at the base of the neck enables the vessel to sit comfortably within the crook of the arm (Ea, pers. comm. January 2006). Mourer (1984:33) points out that this design also eliminates the need for a handle. Despite the lack of a spout the basic form of the *kaam* may nevertheless derive

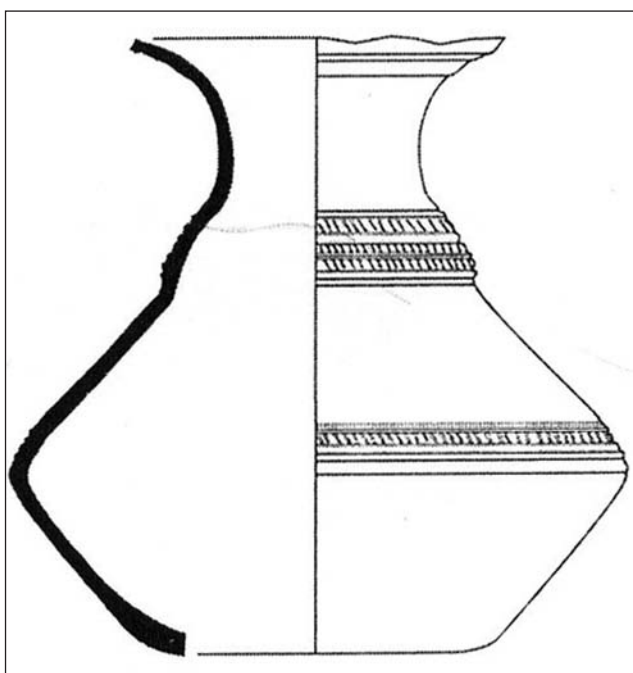


Figure 9: Reconstructed stoneware *kaam* from the Royal Palace, height 30cm; drawing by Marc Franiatte (reproduced from Franiatte 2001: fig. 27).

from carinated *kendi* (e.g. Lu, Feng & Tregear 1983:156, no. 173; FPM 2002:31), such as are found in the Philippines (Brown 1989: figs 59–62; Guy 1986:101, no. 87). One is reported from Srah Srang and dated to the ninth century (Mourer 1986: pl. 27, fig. 3). If this form is indeed the original model, the Cambodian potter simplified it by removing the spout and enriched the decoration through multiple ridging. It is interesting to note that at the Tani kilns only one *kendi* was found, suggesting that this form did not appeal as much as the *kaam*.

At Trapeang Thlok *kaam* are earthenware and at the Royal Palace one is described as being of rather coarse earthenware (Franiatte 2001:110, fig. 27), but the Tani ones are in stoneware and stoneware examples have been found at the eleventh/twelfth-century site of Prasat Ban Phluang, in Surin province, Thailand (Childress and Brown 1978). Few sherds of *kaam* were found at GAP's Tumnup Barang site; there were parts of only two vessels, one an earthenware rim and neck, the other a sherd of hard-fired grey ware, with incised decoration on the ridged shoulder (no. 4449). On this sherd, diagonal rouletting has been used to create a distinctive pattern immediately identified by villagers as 'snakeskin' (Figure 10). This can be seen also at Tani (no. 380, Nara 2005: pl. 52). Is this a deliberate allusion to the symbolic connection between the *naga* snake and water? In the Khmer creation myth the Naga King ruled the waters of Cambodia and was the ancestor of its royal families though the marriage of his daughter to the first Khmer king (Ang 2007). If there is such an allusion, the *kaam* might have both ritual and practical uses; perhaps the earthenware forms are utilitarian water-pourers, while the stonewares may have more sacred functions.

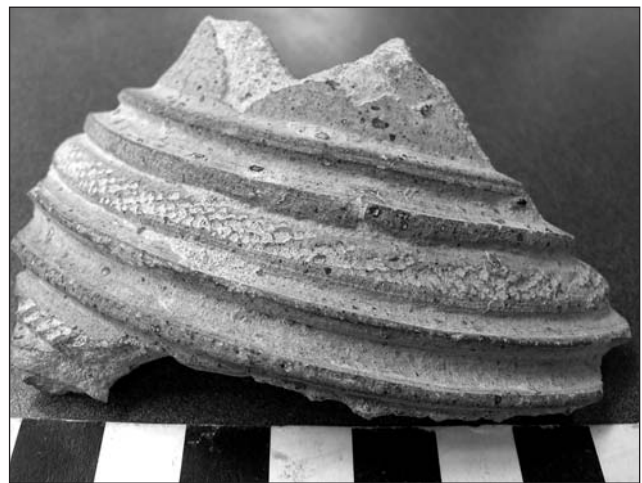


Figure 10: Sherd from a stoneware *kaam*, with snakeskin decoration, from the GAP excavations at Tumnup Barang, Angkor.

It is interesting to note that *kaam* are not shown on the Bayon or at Banteay Chhmar. Given that they were in use at that time, as the archeology clearly indicates, why choose not to show them? The *kendi* might be considered more appropriate for ritual scenes, but one would still expect to see *kaam* in the domestic scenes. On consideration, there are other omissions, such as any scenes of agriculture, though the artists would certainly have been able to show ploughing, rice planting and rice harvesting. This suggests that the domestic scenes do not represent village life but the life of the city, where fishing and fruit-picking could be observed on a daily basis, since the city of Angkor Thom was crisscrossed with waterways and its houses had adjacent gardens, each with a fishpond (Gaucher 2003). The Royal Palace itself had wooded areas and fishponds.

Everything we know about Jayavarman VII (or his designers) tells us that the realism of the bas-reliefs was not an accident; they appear to deliberately include every class, from the king to market vendor and occupations from midwifery to warfare. As Groslier put it, while images could be read differently by different viewers, from peasant to scholar, 'they were nonetheless understood, real and efficacious for each person' (1973:303). So why exclude the people's major occupation, which is also a major feature of the Cambodian landscape? This is yet another question to add to the ongoing debate about the nature and ideology of Jayavarman VII's reign. The study of ceramics will certainly not answer many of those questions, but it may help to formulate them.

In conclusion, ceramics contribute to Khmer studies in many ways, of which this paper briefly considers two. The first is the realistic depiction of contemporary ceramics on the Bayon temple; it is suggested that realism was intended to reinforce the message that the king was all-seeing and intimately concerned with the life of his subjects. The second is the import of Chinese ceramics; it is suggested that these may be part of a far more significant trade in horses which has left no traces other than depictions on temple relief. While these conclusions may seem far removed from the initial study of terracotta brasiers, they are in the spirit of Graham Connah's celebrated injunction to go beyond 'stamp-collecting' towards broader issues of material culture.

ACKNOWLEDGEMENTS

Thanks are due to the Directors of GAP, Professor Roland Fletcher and Dr Christophe Pottier for their generous help over the years. The GAP sites were excavated under the overall direction of Dr Wayne Johnson, with Shaun Mackay at Tumnap Barang. The first recording was carried out by Philippa Weaver, who also established the first ceramic collection. I thank all three for their kindness, patience and attention to detail.

The ceramic material from GAP could never have been catalogued, let alone analysed, without the dedicated work of over 30 volunteers. Their tenacity, professionalism and good humour made tedious work positively enjoyable and it is a pleasure to be able to thank them again. I particularly wish to acknowledge the contribution over the years of Kirsty Altenburg, Jane Calthorpe, Virginia das Neves, Cecily Parris, Alexandra Rosen and Maartje Zwaneveld. I also thank Ngaire Richards, who redesigned the database, and Leonard Cox for generously sharing his expertise in Chinese ceramics; thanks are also due to John Miksic, Sharon Wai-Yee Wong and Geoffrey Wade of the National University of Singapore. Finally, I owe a particular debt of gratitude to Ea Darith, of APSARA, for his friendship and his expert advice on Khmer ceramics.

BIBLIOGRAPHY

- AL-GEORGE, S. and A. ROUS 1957 'Pūrṇa ghaṭa et le symbolisme du vase dans l'Inde', *Arts Asiatiques* 4(4):243–254.
- ANG, C. 2007 'In the Beginning was the Bayon', in J. Clark (ed.) *Bayon: New Perspectives*, River Books, Bangkok, pp. 362–380.
- ANG, C. and A. THOMPSON (eds) 2001 *Udaya 1*, Siem Reap: APSARA.
- BÂTY, P. and A. BOLLE 2005 'Sanctuaires et habitats sous l'aéroport de Siem Reap', *Archéologia* 427 (Novembre):18–23.

- BROWN, R.M. 1981 *The Ceramics of South-East Asia: Their Dating and Identification*, Oxford University Press, Singapore.
- BROWN, R.M. (ed.) 1989 *Guandong Ceramics from Butuan and Other Philippine Sites*, Oriental Ceramic Society of the Philippines and Oxford University Press, Manila.
- BUNKER, E.C. and D. LATCHFORD 2004 *Adoration and Glory: The Golden Age of Khmer Art*, Art Media Resources, Chicago.
- CHIA, S. 2003 'Prehistoric Pottery Production and Technology at Bukit Tengkorak, Sabah, Malaysia', in J.N. Miksic (ed.) *Earthenware in Southeast Asia: Proceedings of the Singapore Symposium on Premodern Southeast Asian Earthenwares*, Singapore University Press, Singapore, pp. 187–200.
- CHILDRESS, V.R. and R.M. BROWN 1978 'Khmer Ceramics at Prasat Ban Phluang', *Arts of Asia* 8(1):67–73.
- CLARK, J. (ed.) 2007 *Bayon: New Perspectives*, River Books, Bangkok.
- CLARKE, D.L. 1968 *Analytical Archaeology*, Methuen, London.
- CLARKE, D.L. and G. CONNAH 1962 'Remanent Magnetism and Beaker Chronology', *Antiquity* 36:206–209.
- CORT, L.A. 2000 'Khmer Stoneware Ceramics. The Hauge Gifts', in L.A. Cort, M. Farhad and A.C. Gunter (eds) *Asian Traditions in Clay*, Freer Gallery of Art and Arthur M. Sackler Gallery, Smithsonian Institution, Washington, D.C., pp. 91–149.
- COURBIN, P. 1988 *La fouille du Sras Srang*, ÉFEO Collection de textes et documents sur l'Indochine XVII, Paris.
- CREMIN, A. 2006 'Chinese Ceramics at Angkor', *Indo-Pacific Prehistory Association Bulletin* 26:121–123 and online www.ippa.
- CUNIN, O. 2007 'The Bayon: an Archaeological and Architectural Study', in J. Clark (ed.) *Bayon: New Perspectives*, River Books, Bangkok, pp. 136–229.
- DUMARÇAY, J. 1967 *Le Bayon: Histoire architecturale du temple: Atlas et notice des planches* ÉFEO Mémoire archéologique III, Paris.
- DUMARÇAY, J. 1973 *Le Bayon: Histoire architecturale du temple*, ÉFEO Mémoire archéologique III-2, Paris.
- EA, D. 2007 New data on the distribution of Khmer ceramic kilns, unpublished paper to the Conference on Ancient Khmer and Southeast Asian Ceramics: new archaeological findings, production and the revival of techniques, Centre for Khmer Studies, Siem Reap.
- FUJIAN PROVINCIAL MUSEUM 2002 *The Highlight of Fujian Provincial Museum's Collection of Precious Cultural Relics*, Fujian Education Press, Fujian.
- FRANIATTE, M. 2001 'Nouvelles analyses de la céramique khmère du Palais Royal d'Angkor Thom' *Udaya* 1:91–124.
- GAIROLA, C. K. 1954, 'Evolution du pūrṇa ghaṭa (vase d'abondance) dans l'Inde et l'Inde extérieure', *Arts Asiatiques* 1(3):209–226.
- GAUCHER, J. 2003 'New Archaeological Data on the Urban Space of the Capital City of Angkor Thom', in A. Karlström and A. Källén (eds) *Fishbones and Glittering Emblems. Southeast Asian Archaeology 2002*, Museum of Far Eastern Antiquities, Stockholm, pp. 233–242.
- GITEAU, M. 1976 *Angkor – un peuple – un art*, Office du Livre, Fribourg.
- GROSLIER B.P. 1973 *Les inscriptions du Bayon*, ÉFEO Mémoire archéologique III-2, Paris.

- GROSLIER B.P. 1981a 'Introduction to the Ceramic Wares of Angkor', in D. Stock (ed.) *Khmer Ceramics 9th–14th Centuries*, Southeast Asian Ceramic Society Singapore, pp. 9–39.
- GROSLIER B.P. 1981b 'La céramique chinoise en Asie du Sud-Est: quelques points de méthode', *Archipel* 21:93–121 [Reprinted in J. Dumarçay (ed.) 1988 *Mélanges sur l'archéologie du Cambodge (1949–1986)*, ÉFEO, Paris, pp. 221–245].
- GUÉRIN, A. 2002 Étude préliminaire des céramiques de Sambor Prei Kuk provenant des fouilles de B.P. Groslier (1962) et conservées au Musée National de Phnom Penh. Annexe, typescript report, Mission archéologique franco-khmère sur l'aménagement du territoire angkorien (MAFKATA), Siem Reap.
- GUY, J.S. 1986 *Oriental Trade Ceramics in South-East Asia Ninth to Sixteenth Centuries*, Oxford University Press, Singapore.
- HENDRICKSON, M. 2007 'New Evidence of Brown Glaze Stoneware Kilns Along the East Road from Angkor', *Indo-Pacific Prehistory Association Bulletin* 27:52–56 and online at www.ippa.
- INRAP (Institut National des Recherches Archéologiques Préventives), Base INRAP de Poitiers et APSARA 2004 L'aéroport de Siem Reap 2004, typescript report.
- JACQUES, C. and M. FREEMAN 1997 *Angkor: Cities and Temples*, Thames & Hudson, London.
- JACQUES, C. and M. FREEMAN 2003 *Ancient Angkor* (2nd ed.), River Books, Bangkok.
- JACQUES, C. and P. LAFOND 2007 *The Khmer Empire: Cities and Sanctuaries from the Fifth to the Thirteenth Century*, River Books, Bangkok.
- JSA (Japanese Government Team for Safeguarding Angkor/UNESCO) 2005 *The Bayon Master Plan*, Japan International Cooperation Center (JICE), Tokyo.
- LU, Y., X. FENG and M. TREGGAR 1983 *Song Ceramics*, Southeast Asian Ceramic Society, Singapore.
- LY, D. and I. MUAN 2000 *Ceramics from 'Lor Pok'*, Reym, Phnom Penh.
- MALLERET, L. 1960 *L'Archéologie du Delta du Mékong. Tome second: La civilisation matérielle d'Oc Éo*, ÉFEO, Paris.
- MAXWELL, T.S. 2007 'Religion at the Time', in J. Clark (ed.) *Bayon: New Perspectives*, River Books, Bangkok, pp. 72–135.
- MOURER, R. 1984 'Technical Progress: What for? Some Reflexions on Pottery in Cambodia', in J. Picton (ed.) *Earthenware in Asia and Africa: a colloquy held 21–23 June 1982*, Colloquies in Art and Archaeology in Asia 12, Percival David Foundation of Chinese Art, SOAS (School of Oriental and African Studies), University of London, London, pp. 28–53.
- MOURER, R. 1986 'La poterie au Cambodge. Histoire et développement: essai d'ethnoarchéologie', typescript PhD, École des Hautes Études en Sciences Sociales, Paris.
- MUSÉE GUIMET 2005 *La sculpture chame*, catalogue, Musée Guimet, Paris.
- NAGASHIMA, M. 2002 *The Lost Heritage: The Reality of Artifact Smuggling in Southeast Asia*, Post Books, Bangkok.
- NARA 2001 'Investigation of the Tani Kiln Site: Geophysical Prospections, Excavations and Site Presentation Proposal', *Udaya* 2:133–140.
- NARA 2005 *Report on the Excavations of the Tani Kilns* [in Japanese], Nara National Cultural Properties Research Institute, Nara.
- NEEDHAM, J. 2004 *Science and Civilisation in China vol. 5, Chemistry and Chemical Technology, part XII: Ceramic Technology by Rose Kerr and Nigel Wood*, Cambridge University Press, Cambridge.
- PARK, H. 2005 'Art History Survey of the Bayon Temple', Appendix 3, in JSA (Japanese Government Team for Safeguarding Angkor/UNESCO) *The Bayon Master Plan*, Japan International Cooperation Center (JICE), Tokyo, pp. 301–335.
- POU, S. 2005 'Les fleurs dans la culture khmère', *Journal Asiatique* 293(1): 45–98.
- PRIOR, R. and I.C. GLOVER 2003 'The Late Prehistoric to Early Historic Earthenware of Central Vietnam', in J.N. Miksic (ed.) *Earthenware in Southeast Asia: Proceedings of the Singapore Symposium on Premodern Southeast Asian Earthenwares*, Singapore University Press, Singapore, pp. 261–284.
- ROONEY, D. 1984 *Khmer Ceramics*, Oxford University Press, Singapore.
- ROONEY, D. 1990 'An Introduction', in H. Fujiwara (ed.) *Khmer ceramics from the Kamratan Collection in the Southeast Asian Ceramics Museum, Kyoto*, Oxford University Press, Oxford, pp. 1–16.
- ROVEDA, V. n.d. [2003] *Sacred Angkor*, River Books, Bangkok.
- ROVEDA, V. 2007 'Reliefs of the Bayon', in J. Clark (ed.) *Bayon: New Perspectives*, River Books, Bangkok, pp. 282–361.
- SCHWEYER, A.-V. 2007 'The Confrontation of the Khmers and Chams', in J. Clark (ed.) *Bayon: New Perspectives*, River Books, Bangkok, pp. 50–71.
- SHARROCK, P. D. 2007 'The Mystery of the Face Towers' in J. Clark (ed.) *Bayon: New Perspectives*, River Books, Bangkok, pp. 230–281.
- SHIPPEN, M. 2005 *The Traditional Ceramics of Southeast Asia*, University of Hawai'i Press, Honolulu.
- SMITHIES, M. (ed.) 2001 *Zhou Daguan: The Customs of Cambodia*, Siam Society, Bangkok.
- STARK, M. 2006 'Pre-Angkorian Settlement trends in Cambodia's Mekong Delta and the Lower Mekong Archaeological Project', *Indo-Pacific Prehistory Association Bulletin* 26:98–109 and online at www.ippa.
- VICKERY, M. 2006 [2008] 'Bayon: New Perspectives Reconsidered', *Udaya* 7.2006:101–173.
- WADE, G. 2003 *The Ming Shi Account of Champa*, Asia Research Institute Working Papers Series No. 3, National University of Singapore, Singapore, online at www.ari.nus.edu.sg.
- WADE, G. 2009 'The Horse in Southeast Asia Prior to 1500 CE: Some Vignettes' in B.G. Fagner, R. Kauz, R. Ptak and A. Schottenhammer (eds) *Pferde in Asien: Geschichte, Handel und Kultur/Horses in Asia: History, Trade and Culture*, Verlag der Österreichischen Akademie der Wissenschaften, Vienna, pp. 164–179.
- YANG, B. 2004 'Horses, Silver and Cowries: Yunnan in Global Perspective', *Journal of World History* 15(3), online at www.historycooperative.org.