Musical instruments of South Asian origin depicted on the reliefs at Angkor, Cambodia

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1. Introduction: musical iconography in SE Asia

The friezes and reliefs on stone monuments in SE Asia are a significant source of data for the history of music in the region. Most of them predate textual sources and many reflect in some way the growth of the Hinduised states in the region. Not all are of equal value in terms of the information they present. This depends on;

the function of the monument
the interface between idealised imagery and representation of the everyday

The most important monuments in terms of representations of musical practice are the Angkor complex and Borobudur (Kunst 1973). Scattered across India there are numerous sculptural images of musical practice and these can often be closely compared with related SE Asian iconography. Pagan in Burma has less musical imagery, although there is a useful record by the poet Po Chu I of a Pyu cultural troupe which visited the Chinese court in 802 AD, during the T'ang dynasty, which includes both musical instruments and musical practice. Unlike Borobudur, Angkor seems never to have been described in detail. A field trip in June 2006[1] set out to catalogue all the musical scenes, to identify the instruments from an organological point of view, to relate them to what is known of their history and ethnography and to suggest their significance in the broader context of both the monuments and the history of the period. This paper presents those instruments usually considered to be of Indian origin and discusses the pattern of influences and contrasts with the iconography of South Asia.

2. Musical iconography at Angkor

The first clear indications of Indian influence on mainland SE Asia come from Chinese records of Fu-Nan, a polity which may have flourished between the 1st and 6th centuries AD and which was home to Indian families and was strongly influenced by Indian kingship rituals and Buddhism. From this period onwards until the fall of Angkor in the 15th century, there was a continuous flow of Indian culture to this region, although actual documentation is very fragmentary (Mabbett & Chandler 1995). Only in periods when iconography flourished is it possible to get a sense of cultural life, although archaeology continues to illuminate other aspects of subsistence and economy.

Although the Angkor complex appears never to have been studied systematically in terms of the music and instruments depicted, some individual scenes are much reproduced (e.g. Morton 1976). The main sites at the Angkor complex with musical iconography are Angkor Wat itself and the Bayon. Almost none of the others have specifically musical images although there are many conventional images of *apsara* dancers, drawing on Indian iconography. Most instruments can be clearly identified and erosion is rarely a problem. However, one or two are debatable, either in terms of their musical nature or whether they are instruments at all.

Angkor Wat and the Bayon are extremely different from one another, despite having a near overlap of time in some phases. Angkor Wat is almost entirely military and ceremonial, and the instruments shown largely reflect this orientation. Although the friezes were constructed over a long period there is no significant change in the type of instruments shown. Angkor fell to the invading Thais in 1431, and although there was some post-fall adaptation of existing monuments to Buddhism, this is the effective *terminus post quem* of musical iconography at Angkor.

The Bayon, carved over a much shorter period, is very different, showing principally music for entertainment. Even where battle scenes are shown, such as apparent naval battles, the instruments are highly inappropriate. The Bayon may well be the more unreliable of the two, representing instruments for their symbolic significance and reflection of the source culture rather than a figuration of their natural context.

[1] Fieldwork was conducted at Angkor in June 2006, following a meeting on Austroasiatic languages, which I was sponsored to attend by EFEO. Thanks to George van Driem for recommending my presence, to Christophe Pottier for funding and encouragement and to Gerard and Som Diffloth going round the monuments with me and helping with identifications

Many of the instruments shown on the friezes remain in use today in Cambodia and can therefore be identified and something of their cultural context established. Descriptions of Khmer musical culture have never been abundant, and since the end of the war only a limited amount has been written, much of it in the accompanying notes to CDs (e.g. Parsons 1993). The descriptions and images in Collaer (1979) represent the situation in the early 1960s, while Narom (2005) gives an account of the current situation intended primarily for a local audience. These descriptions are not necessarily reliable in terms of statements about the past, as they partly reflect the 'post-war' status of the country and partly because what has been published tends to focus on genres of 'new' urban music.

3. The instruments

3.1 Idiophones

Vertical concussion bells, *chhing,* represent a classic import from Hindu culture and are principally associated with religious ceremonies (Figure 1). The bells are hemispherical in profile and are usually joined by a cord lining two loops at their apexes. Similar bells are known in Burma as *sì* (Keeler 1998: Fig. 9). Marcel-Dubois (1941:31) calls them *cymbales en bol à lanière* and records their first representation at Ajaṇṭā in the 6th century and their last at Khajuraho in the 12th century. Although these cymbals are shown both at Angkor Wat and the Bayon, they are played horizontally in Cambodia today (Sam-Ang et al. 1998:162).

Figure 1. Vertical cymbals

Hanging gongs are a quintessentially SE Asian percussion instrument, apparently originating in China ca. 150 BC. All the gongs shown at Angkor are flat (Figure 2), as opposed to the bossed gongs familiar from island SE Asia. Sets of hanging gongs usually as part of military ensembles and beaten by athletic performers are common but gongs are also represented as played by individual performers. There is evidence for gongs in India at an early period. Marcel-Dubois (1941:33) says that flat disc gongs, *ghaṛī*, appear in sculptural representations from the 8-13th centuries. These might be defined as percussion discs rather than true gongs, which are usually considered to have pronounced sidewalls. Kaufmann (1981: Abb. 61) illustrates a middle period frieze from the great stupa of Amarāvati now in the Madras Museum which almost certainly shows a performer beating on a gong suspended on the shoulders of two men. Compared with Cambodia, this gong is relatively deep, resembling the trade gongs that occur throughout island SE Asia. However, it does not appear to have a boss, which might be a fault in the representation. Amarāvati is close to the coast, north of Madras, and it is likely that this exceptional occurrence is an example of Austronesian contact across the Bay of Bengal. Marcel-Dubois (1941:33) also considered there were no true gongs in India and that occasional representations represent imports.

Figure 2. Hanging gong, Angkor Wat

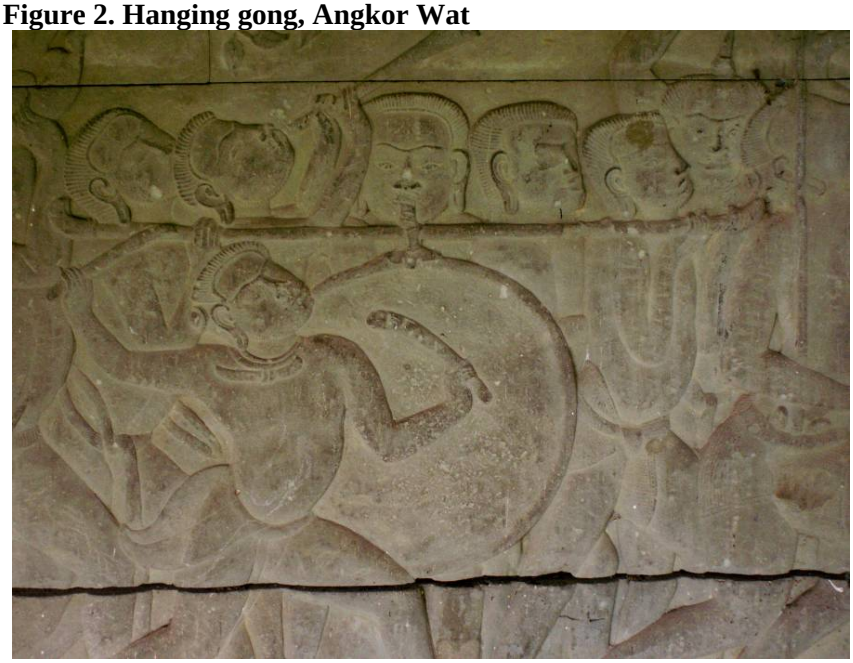


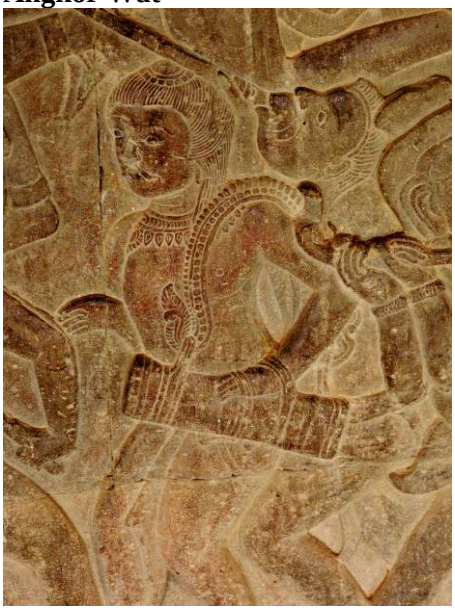
Figure 3. Hourglass drum, Angkor Wat

3.2 Drums

The **hourglass drum** is of Indian origin, and is known as *paṇava* in Sanskrit. Kaufmann (1981: Abb. 8, 9, 23, 33, 74, p. 162, 133, 134) illustrates the various forms typically shown on Indian monuments. The instrument has two heads joined together by a network of laces and by putting pressure on the laces, the player can alter the pitch of the drum during performance. Marcel-Dubois (1941: 63) notes that it appears in some of the earliest Greco-Buddhist sculptures at Haḍḍa and then is not represented for several centuries before re-appearing in the Gupta period, for example at Bādāmi in the 6th century. Earlier types were short and compressed, but representations from the 6th and 7th centuries show a longer, narrower profile (Kaufmann 1981:176 shows examples from Nālandā and Bhuvaneśvara). In some images, the drum is compressed under the arm, which allows for pitch changes during performance, a typically African playing strategy. Blench (1984:163) discusses the remarkable similarities between Indian and sub-Saharan African hourglass drums and it is possible that these drums were also carried westward by Indian craftsmen during the medieval period. The hourglass drum is still played in India; the modern form is known as *timila* in South India and *iṭaykka* in Kerala (Reck 2000:361). As a folk instrument it occurs in a large area of Central India (Bhattacharya 1999: 170).

The hourglass drum is little-known in the SE Asian region and is no longer played. It is shown only once at Angkor Wat (Figure 3) and was probably a short-lived import. However, the playing position in the Angkor relief is virtually identical to that shown in Kaufmann (1981:176, text illustration) which is of a player on the 13th century sun-temple at Koṇarak. The player slips the left hand under a ring of fibre around the waist of the drum in order to manipulate the pitch during performance.

Figure 4. Cylindrical hand-drum, Angkor Wat



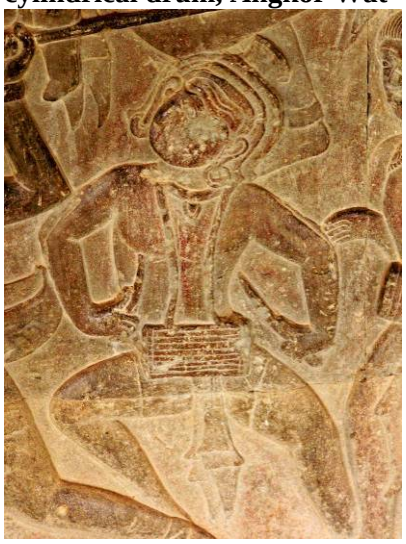
A **cylindrical hand-drum** hit with the palm of the hand is represented several times at Angkor Wat (Figure 4) and once on the Bayon. It survives in modern Cambodia as the *skor arakh* (Collaer 1979:54). Whether such drums originate in India is controversial. Marcel-Dubois' (1941:61) discussion notes that it is difficult to distinguish these drums from biconical barrel-drums on the one hand and some types of hourglass drum. Without clearer evidence, it seems possible these drums are indigenous to SE Asia.

The biconical **barrel-drum** is typically Indian and there are numerous representations in Indian sculpture. Marcel-Dubois (1941:46-60) discusses the many types that appear over time from the 1st century BC to the 17th century AD. Kaufmann (1981: Abb. 63, 70, 76, 107, 108, 110, 124) illustrates different examples, ranging widely both over time and geographically. The most common type in India today is the *mridangam*, also known as the *maddalam* in South India (Bhattacharya 1999: 100-103; Reck 2000). Curiously, only a single example is represented on the Angkor Wat friezes and none on the Bayon. Women are generally represented playing these drums in Indian sculpture and it is possible they were generally used for entertainment ensembles. Barrel drums have now been transmuted into the *skor thom*, pairs of drums played for a wide variety of festive occasions (Collaer 1979). A smaller version of the biconical drum is known in present-day Cambodia as *sampho* and plays a key role in the *pinn peat* ensemble.

Figure 5. Biconical barrel-drum, Angkor Wat

Double-headed cylindrical drums are the most common instrument represented at the Angkor complex, apart from war horns. They are shown eight times at Angkor Wat, with just a single example of a larger type on the Bayon. These drums are presumably the type referred to as *skor toap* 'military drum' in Angkorian times. The players are always represented as in movement and it is likely that they were required to dance or perform acrobatics while playing. These drums are typically of Indian origin, although instruments of this pattern are not apparently shown in historical iconography. Smaller instruments of this type are no longer played in Cambodia.

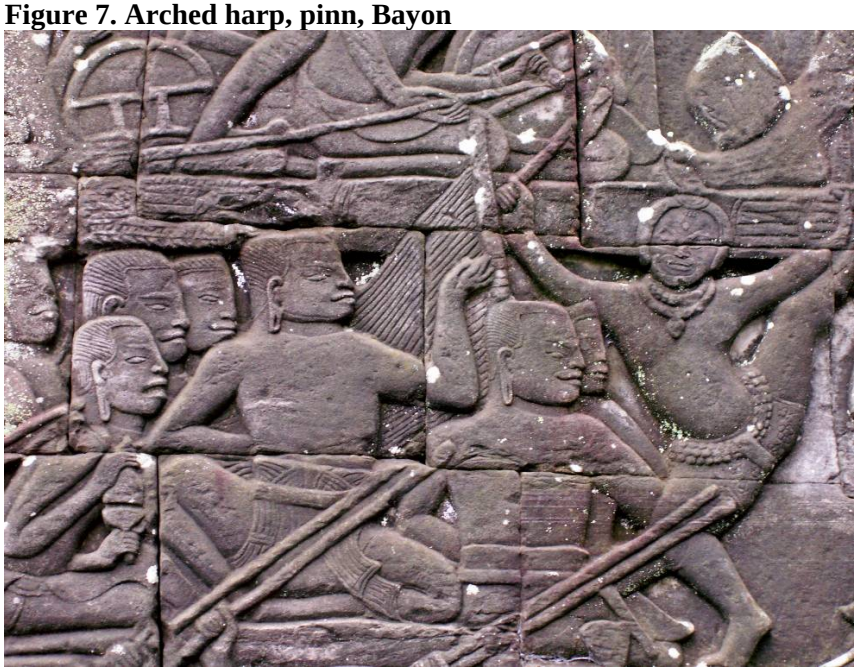
Figure 6. Small double-headed cylindrical drum, Angkor Wat



3.3 Strings

The **arched harp**, *pinn*, which famously survives as the national instrument of Burma (*saùñ*), originated in Egypt or Assyria, but spread early to India and thence to SE Asia. Marcel-Dubois (1941:80-87) notes that it is represented in India from the 2nd century BC to the immediate post-Gupta period. Knight (1985: 11) has tabulated all the representations of the arched harp in India and its last appearance is at Nalanda (8-12th centuries). However, apart from in Burma and some rare folk instruments (Sachs 1917), it has died out in SE Asia. The Karen people of Upper Burma still use the arched harp under the name *tünak*. The Khmer name, *pinn*, comes from Sanskrit *vina*, and ultimately Ancient Egyptian *bin*. The harp appear on Indian reliefs from about 200 BC onwards and is probably the single most common instrument. However, as Knight (1985) points out, the arched harp does survive as an extremely rare folk instrument among the Pardhans of Madhya Pradesh and is described in a rather inaccessible published source

Figure 7. Arched harp, pinn, Bayon

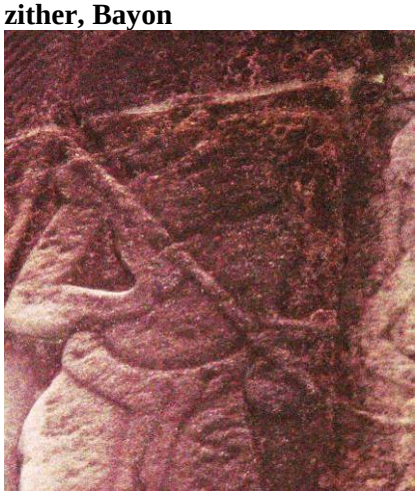


(Hivale 1946).

The arched harp is represented a number of times on the Bayon, played in ensembles with lutes, stick-zithers, by both seated and standing performers, as well as in a boat (apparently!) (Figure 7). The images suggest that it had a large number of strings, but this is unlikely, to judge by surviving instruments in other places; this may be artistic licence. The instrument itself has died out in Cambodia, but its name still survives in the name of the 'national ensemble' the *pinn peat*.

The **stick-zither**, *say diev* (also *khse muoy*), has virtually died out in modern Cambodia, although a few performers still continue the tradition. However, it is still common in Vietnam and has been revived in Lan Na, modern Chiang Mai, where it was once a prestigious instrument. The string(s) pass along the top of a flat bar, resonated with a hemispherical gourd held against the player's chest. According to design, the player can either stop the string to bring out various harmonics, or press the string against projections from the bar. The stick-zither is first represented in India in the 7th century at Māvalipuram (Marcel-Dubois 1941:72). In South Asia, it rapidly develops into instruments more closely resembling the modern *vina* with two gourd resonators and more strings. However, simpler types survive as folk instruments, for example among the Sora (Bhattacharya 1999: 48). Only the original form of stick-zither was carried to SE Asia. The stick-zither is extremely quiet and is only suitable for personal amusement. It is shown on the Bayon several times but not elsewhere (Figure 8).

Figure 8. Chest-resonated stick-zither, Bayon



3.4 Wind instruments

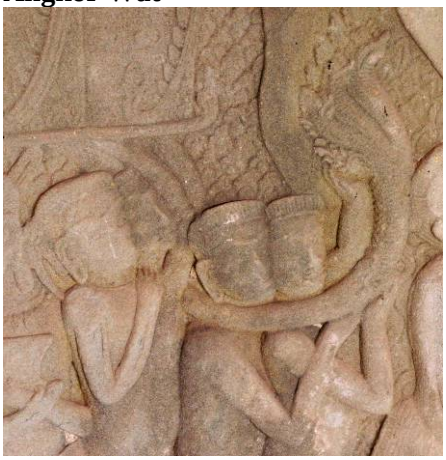
Figure 9. Conch, Bayon

The **conch**, *saing*, was probably introduced with Hinduism as part of Brahminic rituals. The blowing of a conch shell by a priest created a propitious vibratory environment for divination, propitiation, or to signal the arrival of the sovereign. The conch was one of the objects that emerged from the Churning of the Sea of Milk, which is strongly featured in the iconography of Angkor Wat. Marcel-Dubois (1941: 102) records that it is shown being blown vertically at Amarāvati in the 2nd-4th centuries AD. Conches are often shown not as musical instruments but 'floating' in the background of images. Kaufmann (1981: Abb. 83) illustrates a single conch and it is unsure that this is a representation of a musical instrument. This is curious, since conches play such a key role in the ethnography of Hindu ritual and their South Asian origin is freely acknowledged. Conches are still used today in temples throughout SE Asia. However, conches appear at Angkor in what look like military contexts played by specially dressed performers and this suggests they may have been adapted to other uses because of their penetrating sound. Chou Ta-Kuan [= Zhou Daguan] (1993:73), the Chinese diplomat who spent a year in Angkor in 1296-7, records the use of the conch to indicate that the king was in audience.

End-blown horns, straight, curved or S-shaped and made of brass, often with elaborated decoration, may originate in India but have been carried throughout the region by Buddhists as part of the instrumentarium of monasteries. The zoomorphic bells tend to show nagas in SE Asia and dragons in China. Curiously, there appears to be a single example in Indian iconography, in the 1st century BC at Sāñcī (Marcel-Dubois 1941:100). In this instrument, the identity of the animal represented on the bell of the horn is unclear and the mouth is bent downwards rather than pointing in the same direction as the tube of the horn. Tarlekar & Tarlekar (1972: 51) point out that the players seem to be represented as foreigners by their dress. However, such instruments are common in folk traditions influenced by Buddhism; zoomorphic horns exist in Nepal and Ladakh and it is therefore possible they were not carried directly to SE Asia by sea.

End-blown horns are shown extensively at Angkor Wat and not at all on the Bayon, as part of military bands alongside gongs (Figure 10). In a rather extreme case, one player appears to be blowing two horns simultaneously. This is practised with trumpets in India and is shown in European medieval manuscripts, so it is technically possible.

Figure 10. War-horn with naga bell Angkor Wat



4. Other aspects of performance

Apart from the instruments, some other aspects of performance can be gauged from a comparison of Indian iconography with the Angkor complex. One of the most striking of these is the gender of performers. A general view of the images in Kaufmann (1981) makes it clear that the majority of Indian musicians were women, and that this is related to a broader preference for representations of leisure scenes. If there were more military scenes it is possible that men would be more common. In the Angkor complex, almost all musicians are men. Figure 11 shows what appears to be the only female performer, playing an unfamiliar bowed instrument which seems to have no modern analogue. This in part reflects the militaristic orientation of Angkor Wat. However, the secular music represented on the Bayon is also essentially male, presumably reflecting the actual situation in the period. Indeed, it is largely true today, that men are musicians and women are dancers, rarely playing instruments in the dominant Khmer culture.

Figure 11. Female performer on the Bayon

Another intriguing aspect of the friezes is the absence of some very common Indian instruments. In Indian sculpture, the transverse flute and the piriform lute[2] are represented numerous times throughout the period when Indian culture was being carried to SE Asia. Yet these instruments were never transferred, either in iconography or in practice. The explanation may be that they were regarded as women's instruments or that they were not popular with the very specific peoples who transported Indian culture to India. However, all of this would also seem to apply to the harp, which evidently was once very popular.

Musical iconography in the Angkor complex provides a valuable if not entirely reliable guide to the transfer of ideas and images that made up Khmer culture of the period. Much of what is represented on the friezes survives in some form in present-day Cambodia. Instruments not covered here that seem to be native to the SE Asian mainland are also part of the larger musical picture and it is fortunate that such a rich source survives in a relatively decipherable form.

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[2] The Bayon has one representation of a small lute held nearly vertically with a rounded soundbox, which seems similar to some types of folk-lutes found in the region today, or perhaps small Chinese lutes. But the large lute with a pear-shaped body, resembling the modern Arab lute and perhaps brought to India by the Greeks, seems to be completely absent in SE Asia.

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