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Rouletted Ware Links South and Southeast Asia through Maritime Trade

In the following study, **Shahnaj Husne Jahan** attempts to identify the maritime trade network of South and Southeast Asia by examining circulation networks of Rouletted Ware.

Introduction

T he scholarly works of the 20th century have shown that the Indian Ocean trade network prior to the 3rd century CE extended from the Red Sea to the South China Sea, incorporating the core littoral regions of the Arabian Sea and the Bay of Bengal (Mookerji, 1912; Chandra, 1977; Sarkar, 1986; Ray, 1994; McPherson, 1998; Gupta, 2002). Arduous effort by archaeologists made over the last four decades has revealed a rich collection of artefacts, each pregnant with startling revelations of South and Southeast Asia's past. Archaeological artefacts found in coastal sites of Myanmar, Thailand, Vietnam, Malaysia and Indonesia clearly indicate that maritime trade between these regions and South Asia was established by the 3rd century BCE. Furthermore, early Sanskrit and Pali literature indicate that the trading communities of vanijas and setthis arose in the middle Ganga Valley; and salt, metals, textiles and pottery were the standard items of trade. One of the characteristics of early trade in South Asia was that it was not politically controlled or administered. Instead an analysis of early inscriptional data indicates that it was in the hands of merchants and guilds that in most cases cut across political boundaries (Ray, 1989: 42-43). A particular type of fine ceramic known as Rouletted Ware may be considered as one of the very important evidence for exchange between South and Southeast Asia within the timeframe of the 3rd century BCE to the 3rd century CE.

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Rouletted Ware is so called because a variety of forms including triangles, diamonds, parallelograms, wedges, and dots are 'rouletted' in a series of concentric grooves or incisions on the interior surface of the base. The pattern consists of one to three bands of concentric circles and each band contains three to ten rows of closely placed

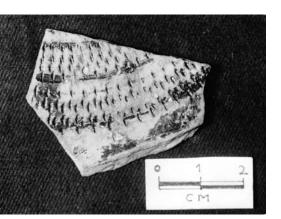


Fig. 1 Rouletted Ware from Mahasthangarh, Bangladesh.



Fig. 2 Rouletted Ware from Wari, Bangladesh.

indentations. It is characterized by thick incurved rims, a contiguous body and base, and is usually wheel-thrown, well fired, thin sectioned and slipped, with an unusually smooth and strikingly lustrous surface. Its usual colour is grey and has a ring, which sounds almost metallic. Mostly found in the shape of a flat-based shallow dish, Rouletted Ware was a luxury item and was possibly meant for the use of the elite class of the society.

Distribution Pattern of Rouletted Ware in South Asia

The distribution of Rouletted Ware in South Asia was indeed widespread. In Bangladesh, the ware has been reported from Mahasthangarh (Bogra district) [fig 1] and Wari-Bateshwar (Narsingdi district) [fig. 2]. In India, it has been found in West Bengal at Chandraketugarh,

Deulpota, Atghara, Harinarayanpur and Hadipur (24-Parganas district), Tamluk, Tilda, Bahiri, Boral and Natshal (Medinipur district), Mangalkota (Bardhaman district), Saptagrama (Hugli district); in Orissa at Sisupalgarh (Khurdha district), Manikpatna (Puri district) and Radhanagar (Jajpur district); in Maharashtra at Junnar (Pune district), Paithan (Aurangabad district), Nashik (Nashik district),

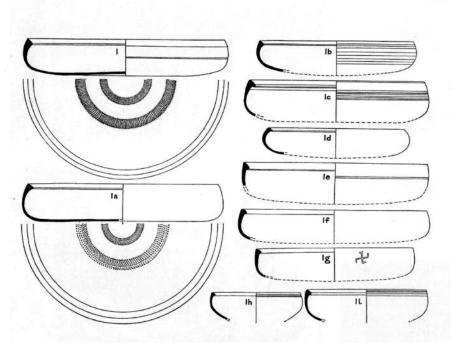


Fig. 3 Drawing of Rouletted Ware from Arikamedu after Wheeler et al. 1946

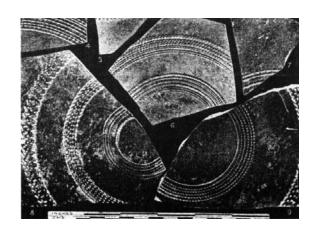


Fig. 4 Rouletted Ware from Arikamedu after Wheeler et al. 1946

Nevasa (Ahmednagar district), Ter (Osmanabad district); in Andhra Pradesh at Kondapur (Medak district), Salihundam (Srikakulam district), Vamulapadu and Satanikota (Kurnool district); in Karnataka at Maski (Raichur district), Brahmagiri and Chandravalli (Chitradurga district); in Tamil Nadu at Kanchipuram (Kanchipuram district), Karaikadu (Cuddalore district), Arikamedu (Pondicherry) [fig. 3 and fig. 4], Kaveripattinam (Krishnagiri district), Karur (Karur district), Manigramam (Nagapattinam district), Uraiyur

(Tiruchchirappalli), Alagankulam (Ramanathapuran district) and Sengamedu (Perambalur district); in Uttar Pradesh at Ayodhya (Faizabad district) and in Bihar at Rajghat. In Pakistan, the ware has been reported from Taxila, while archaeological sites in Sri Lanka, which yielded Rouletted Ware, are Anuradhapura, Kantarodai, Mantai, Tissamaharama and Ambalantota.

Archaeological excavations in South Asia have vielded very little evidence in terms of dates that can help to identify the dispersion and spread of Rouletted Ware. The scant evidence that is available shows that the earliest Rouletted Ware in South Asia is from Anuradhapura. Since Deraniyagala's (1990: 274) radiocarbon dating has ascertained its manufacture in 250 BCE, the same can be accepted as the commencement date for Rouletted Ware in South Asia. On the other hand, the terminal date can be accepted as the 3rd century CE, since, as Ghosh (1986: 79) has logically argued, the ware has not been found at Nagarjunakonda (Andhra Pradesh). This is also supported by recent research at Anuradhapura, which has extended its chronology till 300 CE (Coningham, 1999). At Arikamedu, the ware has been dated from the 2nd century BCE (Begley, 1988: 440). Although Rouletted Ware from West Bengal and Bangladesh has not been dated, a relative chronology can nevertheless be worked out. To do that, one needs to remember that in most cases, Rouletted Ware in West Bengal and Bangladesh has been found along with Northern Black Polished Ware (NBPW). Dilip Chakrabarti (1992: 178) has ascertained that the earliest occurrence of NBPW in the eastern parts of South Asia is c. 300 BCE. Accepting a similar date for West Bengal and Bangladesh, which fall within this region, it is possible to benchmark c. 300 BCE for the earliest occurrence of 'Bengal' Rouletted Ware. On the basis of the above arguments, it is possible to place South Asian Rouletted Ware in the broader time bracket of the 3rd century BCE to the 3rd century CE.

Distribution Pattern of Rouletted Ware in Southeast Asia

Recent archaeological explorations and excavations in Southern Thailand have revealed a large number of Rouletted Ware sherds from quite a few archaeological sites along the Andaman Coast in Ranong province and on the east coast of the Kra Isthmus in Chumphon province. Archaeological sites which yielded Rouletted Ware along the Andaman Coast are at Pak Chan in Kra Buri district, Kapoe in Kapoe district and Phu Khao Thong [fig. 5] in Suk Samran district in Ranong province and on the east coast of the Kra Isthmus at Khao Sam Kaeo archaeological site in Muang district and Tham Thuay [fig. 6] in

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Fig. 5 Rouletted Ware from Phu Khao Thong. Courtesy: Boonyarit Chaisuwan.

Thung Tako district in Chumphon province (personal observation, during my field visit to Southern Thailand from October 2010 to January 2011). Among these, only excavated Rouletted Ware sherds from Khao Sam Kaeo archaeological site in Chumphon province have been analysed technologically by P. Bouvet (2009) and are dated between fourth and 2nd century BCE, based on radiocarbon dating. Rouletted Ware sherds of Phu Khao Thong have been reported by Captain Boonyarit Chaisuwan (Chaisuwan and Naiyawat, 2009). All Rouletted Ware sherds found in the above-mentioned archaeological



Fig. 6 Rouletted Ware from Tham Thuay. Courtesy: Chumphon National Museum

sites of Southern Thailand are identical in their shape, colour, and fineness. All are wheel-made, well fired and slipped. Most of the best preserved pieces show lustrous surface, and were mostly found in the form of a shallow dish. All of these sherds show the rouletted decoration of a series of concentric grooves or incisions on the centre of the interior base.

Besides the above-mentioned archaeological sites of Southern Thailand, Rouletted Ware has also been reported from Chansen in Central Thailand (Bronson, 1976). Other archaeological sites of Southeast Asia that yielded Rouletted Ware sherds are at Beikthano on the Irrawaddy River in Central Myanmar (Aung Thaw, 1968); Bukit Tengku Lembu in Perlis on the western coast of Malaysia; Kobak Kendal and Cibutak in North West Java, Indonesia (Walker and Santoso, 1977-78); Sembiran, a coastal site on the north coast of Bali, Indonesia (Ardika and Bellwood, 1991); and Tra Kieu, the ancient Cham capital of Simhapura in Central Vietnam (Yamagata and Glover, 1994). Among these, Rouletted Ware of Sembiran has been dated from the last centuries BCE to the early centuries of the Christian Era (Ardika and Bellwood, 1991) and Rouletted Ware of Tra Kieu has been dated to the 1st century BCE and the first half of the 1st century CE (Yamagata and Glover 1994).

Production Centres

What is most significant about all the findings of Rouletted Ware noted above is that they are all comparable in form, texture, colour of the slip and general appearance to the earliest examples of the same found at Arikamedu during the 1945 excavation. Since 1945, scholars have tried to solve the problem of the origin of the distinctive rouletted decoration, which was believed to have been made with roulette. Since the decoration was identified as distinctly non-Indian and since it bore similarity with imported Arretine ware found at Arikamedu, Wheeler concluded that the designs as well as finer quality Rouletted Ware found at the site were imported from the Mediterranean region, while the cruder variety was locally made. The imitations of Rouletted Ware made locally were believed to be distinct because of the softer fabric

and coarse rouletted design (Wheeler *et al.*, 1946: 46; Wheeler, 1947-1948: 200; 1976: 50). However, as Begley (1983: 469, 478 and 1988: 439) has pointed out, Rouletted Ware at Arikamedu predates Arretine imports. Therefore, Arretine ware could not have been the source of inspiration for Rouletted Ware. She is of the opinion that the Rouletted Ware of Arikamedu was probably produced locally, possibly made at Arikamedu, or in the vicinity of the settlement. Because the technique of rouletting was not known to the cultures of south India at that time, Begley too believes that it was possibly introduced from the Mediterranean region, where it was practiced from the 4th century BCE.

Having examined the opinions of Wheeler and Begley, it is necessary now to look into the scientific analysis of Rouletted Ware in order to investigate its alternative production centres. In the Neutron Activation Analysis (NAA) for 20 rare elements performed on nine sherds of Rouletted Ware (two from Anuradhapura, two from Arikamedu, one from Karaikadu, three from Sembiran and a single sherd from Pacung), it was found that all of them are close in composition. Hence, Ardika & Bellwood (1991: 224) conclude, "a single manufacturing source for all the samples listed, both Indian and Balinese, is a definite possibility."

Two X-ray diffraction (XRD) analyses have so far been performed on Rouletted Ware. One of these, performed by Ardika & Bellwood on eight sherds (one from Sembiran, four from Anuradhapura and three from Arikamedu), has revealed that all contain essentially the same minerals, which are mainly quartz with traces of mica, muscovite, potassium feldspar and plagioclase feldspar. The basic composition of slip and sherd interior was also found to be similar, except for one sample from Anuradhapura, which contained traces of hematite in its slip. What is most significant is that the composition of the rouletted sherd from Sembiran is not identical with the soil samples from the find spot and local sherds.

Another XRD analysis was performed by Vishwas D. Gogte (1997: 69-85 and 2001: 197-202) on Rouletted Ware and clay from Mahasthangarh in Bangladesh; in India, from Tamluk and Chandraketugarh in West

Bengal; Sisupalgarh and Manikpatna in Orissa; Nashik in Maharashtra; Kottapatnam in Andhra Pradesh; Hampi/Annegondi in Karnataka; Arikamedu, Alagankulam, Adichanallur in Tamil Nadu; Tissamaharama in Sri Lanka and Tra Kieu in Central Vietnam. The analysis shows that Rouletted Ware from all the sites mentioned above is mineralogically identical with the Rouletted Ware and the clay from Chandraketugarh. Furthermore, the XRD pattern of the Nashik sample matched closely with the clay from Tamluk and to a lesser extent, with that of Chandraketugarh. From these results, Gogte (1997: 83) concludes that "Rouletted Ware was produced at multiple production centres in the lower Ganga plain with the epicentre in the Chandraketugarh-Tamluk region of Bengal".

All the three tests discussed above point to a single conclusion. The "single manufacturing source" indicated by the NAA and similar mineral content indicated by Ardika & Bellwood XRD analysis is further supported by Gogte XRD analysis, which shows that the "single source" is none other than the lower Ganga plain in general, and Chandraketugarh-Tamluk region in particular. However, Bellina and Glover (2004: 78) find it difficult to accept Gogte's arguments that all came from Bengal. Likewise, Ford et. al. (2005) reminds us that "these studies need further investigation because XRD is not likely to be conclusive in assigning geological source, and the NAA result so far is based on only 10 samples." Ford et. al. (2005: Appendix 2) have carried out a geochemical investigation on 127 ceramic sherds from Anuradhapura, Kantarodai, Mantai, Arikamedu, Alagankulam and Vaddamanu as well as modern clay and modern pottery collected at Anuradhapura. Interestingly, the result of their analysis shows the common geological origin in India, and it has been postulated that this type of pottery was probably the product of indigenous communities from a single long-running major ceramic production centre (Ford et. al., 2005). It should be noted here that the above-mentioned geochemical analysis also points to a single manufacturing source. In addition, there is no inconsistency among the scholars that the Rouletted Ware originated in South Asia.

As already mentioned above, Rouletted Ware in West Bengal and Bangladesh has been found along with Northern Black Polished Ware. Similar feature can be seen in the case of Southern Thailand as well. In this connection, the author refers to another XRD analysis on Northern Black Polished Ware and Rouletted Ware from Mahasthangarh in Bangladesh that has been conducted by Vishwas D. Gogte (2001: 198). The analysis shows that "the clays used in the production of all varieties of Northern Black Polished Ware having surface colours of black, red, brown, golden yellow and silver have been found to be exactly identical with those of the Rouletted Ware found at the site." It has been shown that, in the production of Northern Black Polished Ware and Rouletted Ware, not only the same technology was employed but they were also produced from the same type of clays of the Ganga plain. It was also suggested that the lustrous Rouletted Ware might simply be treated as yet another variety of Northern Black Polished Ware with an indented circular decoration.

Hence, it may be concluded that NBPW and Rouletted Ware were both produced in the lower Ganga plain within the timeframe of the 3rd century BCE to the 3rd century CE. However, because it has not been possible so far to identify kilns with wasters, which may have produced this type of ware, it is not possible to state with certainty where the production centres may have been located. We may also think of carrying out some more geochemical analysis including samples from the sites in Bangladesh, West Bengal (India) and Southern Thailand. Nevertheless, one can suggest that like NBPW, Rouletted Ware also spread from the Ganga Valley into South India as well as across the Bay of Bengal to Southeast Asia from the maritime port sites of Tamralipti (Tamluk), Gangabandar (Chandraketugarh) and Wari-Bateshwar (for details of these maritime port sites, see Jahan 2006: 9-29). Since these ports were the only outlets for the entire north and northeastern part of South Asia, they played an important role in the history of maritime trade of the entire region.

Concluding Remarks

Rouletted Ware is a definite indicator of maritime trade between South and Southeast Asia within the time frame of the 3rd century BCE to the 3rd century CE. There can hardly be any doubt that the considerable

number of Rouletted Wares found at each site of South and Southeast Asia signifies that maritime contact was not accidental but of a "recurrent and repetitive" nature and, thus, it featured in a "typical inventory of trading goods". The distribution pattern of the ware is implying in turn that the trans-shipment of wares possibly took place along a coastal trade route (Sri Lanka-South India-Orissa-Bengal-Southeast Asia). 'Bengal' lies mid-point between the western arm of the route (to south India and Sri Lanka) and the eastern arm (to Myanmar, Thailand, Vietnam, Malaysia and Indonesia). This view is further strengthened when we remind ourselves that coastal trade routes continued even in the medieval period. Primitive navigation and sailing schedule determined by monsoon winds, land and sea breeze would make sailing in this route feasible. It was single route two-ways, necessitating the use of the inter-monsoon period of August-September (for voyages to 'Bengal' from Sri Lanka and South India) and the following inter-monsoon period from November to April (for voyages from 'Bengal' to Southeast Asia).

Since Rouletted Ware was a luxury item and possibly meant for the use of the elite class, the presence of a sizeable affluent community can possibly be deduced in the countries that produced and imported this luxury commodity.

Furthermore, because most of these South Asian sites were centres of Buddhism, and the spread of Buddhism and trade was organically connected, it is possible to conclude that Buddhist religious establishments provided a "religious homogeneity of traders". Rouletted wares clearly show close link of Buddhist religious establishments in South Asia with the merchant class.

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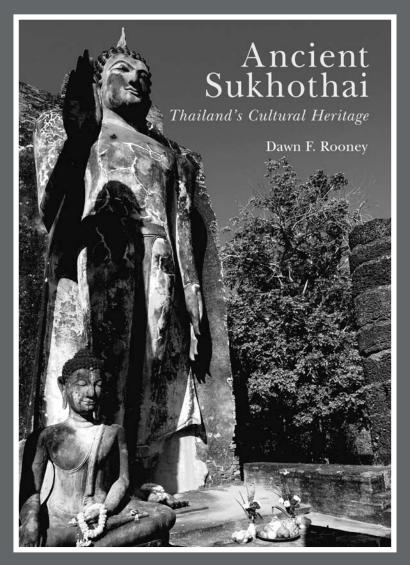
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Dawn F. Rooney, PhD, is an independent scholar and an art historian specializing in Southeast Asia. She is a fellow of the Royal Geographical Society and the Royal Asiatic Society in London, an advisor to the Society for Asian Art Museum in San Francisco, the Thailand representative for the International Map Collectors' Society and the Regional Director, Southeast Asia for Independent Scholars of Asia. Dawn Rooney is the author of several books on the culture of the region including a definitive guide to Angkor. She was awarded a Scholar in Residence at The Rockefeller Foundation Study Center in Bellagio, Italy in 2002 where she wrote her latest book, Thai Buddhas (Bangkok, River Books, 2003). She is an American who has lived in Asia for over three decades and resides in Thailand.

Southeast Asian Elements in the Archaeological Evidence of Northeast India

In this article, **Sukanya Sharma** traces archaeological evidence of the movement of man, material, and ideas between Southeast Asia and Northeast India.

Introduction

It is an undoubted fact that cultural affinities exist between Southeast Asia and Northeast India, and they can be attributed partly to peaceful migration and adaptation to a similar environment. The majority of people in this part of India are of the Indo-Mongoloid stock, and speak various dialects belonging to the Tibeto-Burman family of languages.

Map of Northeast India



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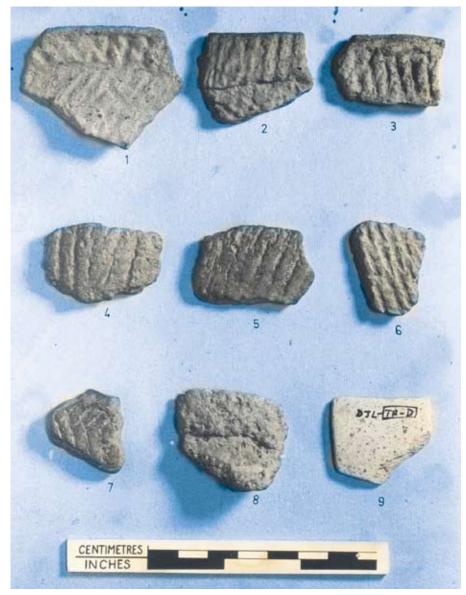
This region can be called the Southwestern boundary of the Mongoloid inhabited areas of the world, which further extends westward along the Himalayas until it reaches Tibet. With population movement, cultural traits also travel. Dispersal of the Mongoloid population to different areas of South, Southeast and North Asia is believed to have taken place during the final phase of the prehistoric period. During this period, the first wave of Mongolians must have entered Northeast India, carrying with them the technique of making pebble tools and amorphous flakes. Consequent migrations brought in the Tibeto-Burman and the Mon-Khmer language. Migration into the area continued till the 13th-14th century CE. The last recorded group is the Ahoms who is believed to have migrated from Thailand. Various folktales of the region are based on these migrations and distant lands from where they come indicating movement of population. Under these circumstances, affinities in the archaeological record between the two areas are expected.

The prehistoric lithic assemblages of Northeast India

The prehistoric lithic assemblages of Northeast India have been an issue of debate among social scientists of the region for quite some time. This is mainly because material evidences of the prehistoric period from Northeast India do not typotechnologically conform to the mainland Indian text. The most convincing evidences are double-shouldered celt and chordmarked pottery. The best evidence comes from the site of Daojali Hading, which was excavated by Prof. T.C. Sharma and Prof. M.C. Goswami in 1961-63. A detailed study of the cultural material from the site was undertaken by Sharma (1966) and the conclusions drawn are:



Shouldered celts



Chord-marked pottery

(i) This is the only evidence of the occurrence of the Neolithic cordimpressed and basket pattern pottery so far found in India. After this discovery, the boundary of the East Asiatic "Corded ware" Neolithic culture can undoubtedly be extended to include northeastern India. Moreover, it confirms the earlier hypothesis developed on the basis of typological study of stone tools that the Neolithic culture of Assam is closely linked with the East Asiatic Neolithic complex (Worman, 1949: 188-89; Dani, 1960: 77).

- (ii) All the stone tools found at the site are closely comparable to those of the late Bacsonian, an industry in Vietnam. The close relationship between these two cultures can also be firmly established on the evidence of the cord-impressed pottery, which is common in both the cultures.
- (iii) The Daojali Hading assemblage can be correlated with the Late Bacsonian of Indo-China. Another closely comparable site is Tam-Toa in Annam (Sharma, 1966). In size, form and technique of manufacture, the small axes and the shouldered axes of Daojali Hading are almost indistinguishable from those of Tam-Toa. Other common implements are the grinding slabs; polishing stones for wooden and bone implements, and the mullers or rubbers. The cord-impressed and some of the incised pottery of both the sites are also identical. There are, however, some differences between Tam-Toa and Daojali Hading. The former seems to contain a Somrong-Sen type of incised pottery that is absent from the latter. As Annam lies between two important cultural zones, Bac-Son on the north and Somrong-Sen on the south, intrusions from both the zones can be expected at Tam-Toa. Daojali Hading also shares some similar types of stone tools and pottery with Somrong-Sen. These are the shouldered axes and the cord-impressed pottery.

The next category of tools that are typically Southeast Asian in character is the short axes. These are chipped axes, sometimes also grounded, which are made on truncated pebbles. Workers in the area had earlier discarded this tool as broken parts of chipped celts, but the occurrences of similar type of tools in other parts of Southeast Asia prove that this is a typical variety of axes found only in the Southeast Asian stone tool assemblages. Short axe, the most frequently occurring pebble tool, is a classic Hoabinhian (a Vietnamese industry) artefact.



Short axes

Amorphous flakes and flake blades are other varieties of tool type reported from Garo Hills. They were earlier relegated to the position of being debitage of the celt manufacturing process ignoring their stratigraphic position, as retouching was absent or minimum and the shapes amorphous. In Thailand, the occurrence of flakes and incipient blades with the Hoabinhian pebble tools is a marked feature. The occurrence of flaked artefacts with the short axes and Sumatraliths has also been reported. In the cultural level I of Spirit Cave in northern Thailand, the retouched and utilized flake category is by far the largest and most interesting group of artefacts (Gorman, 1970:103). Such an association was also reported from the Sai Yok cave of western Thailand dated to the early Holocene (Heekeren and Knuth 1967:23-38). Within India, the typical flake-blade assemblage with the pebble short axes and the bifaces have no parallel.

Recent discoveries at the Lang Rongrien and Moh Khiew in southern Thailand reveal that a distinctly non-Hoabinhian flakes tool industry existed in southern Thailand about 30,000 years ago. The fact that a somewhat similar industry, with dates in the 20,000 BP range, is now recognised in Vietnam (at Nguom and Mieng Hosee Ha) suggests that medium-sized thin tools made on flakes may have been quite widespread during the later Pleistocene in Southeast Asia. The majority of these flakes and blades were not retouched, and are amorphous in shape, but they all showed indications of utilisation. This adds credence to the claim that the lithic flake tools in Southeast Asia were complemented by a non-lithic and, therefore, perishable material such as bamboo and wood (Ronquillo, 1981:10). A similar situation existed in Northeast India, which also explains the gap in the archaeological record. The specialized tools were made from organic materials that have not survived. What remains is the evidence of a generalized tool kit, which mainly consist of processing tools. The presence of a stage called "Lignic" in Southeast Asian prehistory had been proposed in a developmental scheme for the prehistory of Southeast Asia. Existence of such a stage in the prehistory of Northeast India can be hypothetically stated based on the observations made on the contemporary Garo society.

The growth of this similar type of industries might have been the result of contact or as a reaction to similar type of ecological conditions. Tools made from Jadeite have been found in Assam and Nagaland. The nearest jadetite sources are in northern Myanmar and southern China. Tools made on fossil wood were first known from Myanmar, the Anyathian culture but in northeast India too fossil wood have been used for making tools, especially in Tripura, as this is locally available.

Kaolin Pottery and Chinese Glazed ware

Kaolin pottery is a Chinese invention that has been discovered in many archaeological sites of the region. It is produced with decomposed granite named after the Kauling area by Chinese geologist (Chen et.al, 1997), and there are very few places in the world where this clay is found. Kaolin is also said to be a 'corruption' of the Chinese "kaulilzg", meaning high ridge. The pottery was found abundantly in period I of Ambari excavation in Guwahati. Period I is approximately dated from 7th to 12th century. The radio carbon date is 1030+130 CE. Kaolin pottery are found in and around Guwahati city in the Navagraha, Saraniya and Kamakhya hills. It has also been reported from some sites in Nagao and Tezpur as well as from the excavations at Bhismaknagar by Raikar in Arunachal Pradesh. Similar type of pottery have not been found elsewhere in the country, and based on its wide distribution all across the region, it can be taken as a distinct charateristic of the archaeological evidence of Northeast India. This indicates a very early Chinese contact. Ideas had travelled during the early historic period. Ching-teh-chien [Jingdezhen], located in the northeastern part of the Kiangsi [Jiangxi] province, is a well-known site for porcelain manufacture in China. Porcelain is made by mixing Kaolin with another mineral. The history of Ching-teh-chien as a porcelain centre can be traced back to 800 CE. Thus, use of Kaolin predates this period. The occurrence of Kaolin implies the movement of ideas from China as early as 10th century CE. Chinese Glazed pottery has been found in subsequent layers broadly dated to 13th-18th century in several parts of Guwahati, but it has been remarked that there is every possibility of the Chinese celadon ware reaching the Brahmaputra valley earlier than it did in other parts of the country because of the proximity between Assam and China.

Remains of Sri Surya Pahar

Sri Surya Pahar is located 12 km east of Goalpara town, the westernmost district of Assam. The archaeological remains of Sri Surya Pahar are of religious nature. Remains till now unearthed consist of rock-cut sculptures of both Hindu and Buddhist and Jaina faith, and stupas,



Votive stupas and lingas made on the same platform in Sri Surya Pahar

lingas and yoni-pitha, sandstone pillars, stone slabs and small square caverns cut on artificially flattened rock faces. Amongst these remains, the votive stupas – with sizes ranging from 30cms to 3cm in diametre – are the most prominent. The majority of these stupas have been carved on flattened gneissic platforms together with a linga of almost the same size. This occurence of the linga and stupa on the same base is not known in other parts of India, but the co-existence of Brahmanic and Buddhist religious practices is a common phenomenon in Southeast Asia. There is a popular Indonesian cult of "Siva-Buddha" where



Votive stupas and lingas made on the same platform in Sri Surya Pahar

Buddha is considered locally as the younger brother of Siva. Probably in Surya Pahar under the influence of this cult, lingas and stupas were carved on the same base. This cult is believed to have emanated from India, perhaps from ancient Bengal to Southeast Asia (Bapat 1959). Sri Surya Pahar may have been an area where this cult was practised. The Brahmanical sculptures are product of the ninth century idiom of the eastern school which developed as a result of the integration of the Gupta Classical heritage with the autochthonous (Borpujari ed.1990:463).

Ahom Architecture

The establishment of the Shan kingdom in Assam in the 13th century opened up avenues for assimilation of the ideas of the two trends, Indian and Southeast Asian. The Shans, better known in India as Ahoms, carried with them cultural elements from their country of origin. The echo of this contact can be felt in certain architectural types, which appear queer when projected against the medieval development.

The Tai entered Assam in two major waves; the first wave was in the early part of the 13th century under the leadership of Chao Lung Siu-Ka-Pha. The Aiton, Khamti, Khamyang, Phake and Turung, representing the second wave, entered Assam between the middle of the 18th and early 19th centuries (Buragohain, 2009).

Archaeological evidences of the Ahom period are strewn all over the state. They had built and repaired temples, water tanks, ramparts, and quarters for the officials (e.g., the Borphukans house in Guwahati), royal graves or "maidams", two palaces – one at Gargaon and the other at Rangpur – and an entertainment hall at Rangpur.

The Rong Ghar at Sibsagar consists of an oval roof with an elongated octagonal shape. The roof gables are encrusted with a rising projection of a snake or a dragon. The central elongated projections form a structure like a pagoda or small house. This type of architectural design is seen among other Tai groups in Myanmar, Yunnan and northern Thailand.

Shihabuddin Talish, who accompanied the Mughal invaders to Assam in the 17th century, wrote an account of Assam. He mentioned the existence of huge wooden houses used by the Ahom royalty. They were called Kareng and Hawlung. None of these structures have survived but from the account of Shihabuddin Talish, it is clear that they were built in the Tai or Thai patterns of architecture, and are similar to the structures in northern Thailand and Yunnan. They are characterized by roofs resembling fish scales, tall, decorated post and many-tiered roof.

Even the Ahom royal insignia is a winged lion similar to that of the Zhou period of old China. The Lanna Tai of northern Thailand also uses a similar symbol.

The list of affinities between the Ahoms and other Tai groups in Southeast Asia is long but in the archaeological record, these are the major evidences that indicate contact.

Discussion

In 1969, Wilhelm G. Solheim II defined "Southeast Asia" as composing of two distinct parts, and identified the boundaries demarcating the region. According to him, mainland Southeast Asia was the area within the 30th Parallel or the Yangtze River, south through Singapore. Island Southeast Asia included the islands off the coast of the mainland Taiwan through the Andaman and Nicobar Islands. The area extended to Assam and eastern India, and a portion of western New Guinea (Solheim, 1969: 126-127).

Historians have pointed out that there was a northerly land route from India to China through Assam, Upper Myanmar and Yunnan. Historical evidence shows it to have been in use as early as 128 BCE. Steps were taken to develop it, and for better control and protection, China founded the prefecture of Yung-Ch'ang in 69 CE. across the Upper Mekong, with its headquarters east of Salween, about sixty miles from the present border of Myanmar. Along this route, envoys travelled from the eastern part of the Roman Empire to Yung-Cha'ng in 97 CE. The Buddhist I-tsing tells us that it was used at the end of the 3rd century by twenty Chinese monks, who went to the court of Sri Gupta.

In the 4th century CE, China relaxed her hold on the Myanmar frontier to such a degree that in 342 CE, the Yung-Cha'ng prefecture was closed until Ko-Lo-Feng (748-79 CE) of Nanchao reopened it, and thereby promoted much economic development in northern Myanmar as well as contacts between the Pyu of Myanmar and T'ang Court in China. Evidence discovered in Pyu site tends to show that some Indian influence penetrated into Upper Myanmar overland. By the same route, Indian influence came also to the Ta'i kingdom of Nanchao (Hall 1955:23). Prior to this, the Chinese silk industry entered India via Central Asia into Kashmir and North India on one hand and via Sikkim, Manipura and adjoining regions into Assam and Bengal sometime after the 1st-2nd century BCE (Lad, 1983:16).

During the 7th century CE, Indian traders reached Burma (Myanmar), Siam (Thailand) and Champa via eastern Bengal, Manipur and Assam

by sea route. Bhamo, on the banks of the Irrawady in Upper Myanmar was a very important trade centre on the trade route connecting China and Southeast Asia. From Bhamo traders could cross the Patkai range of mountains and enter the Brahmaputra valley, and thence to north India. The Sukhothai kings of Thailand, especially during the reign of Rama Khamheng (1283-c1317 CE) made contact with the Buddhism of northern India by the trade route through Assam, and the influence of Buddhist and Sena art upon their own in the extreme north of the Menam basin is easily recognizable (Hall, 1981: 187).

During the British period, this route was explored for assessing its possible economic advantages, but due to political reasons the British rulers of India and Myanmar did not encourage movements. After the independence of India, the marine routes were used for maintaining contacts with Southeast Asia. The territorial route through Northeast India and Myanmar was abandoned and forgotten. Cultural similarities between the Tibeto-Burman speakers, the dominant majority of Northeast Indian and Southeast Asia have always been known, but that they were part of the Southeast Asian cultural pattern was not recognized. With archaeological evidence, it is now confirmed that this part of India is culturally Southeast Asian.

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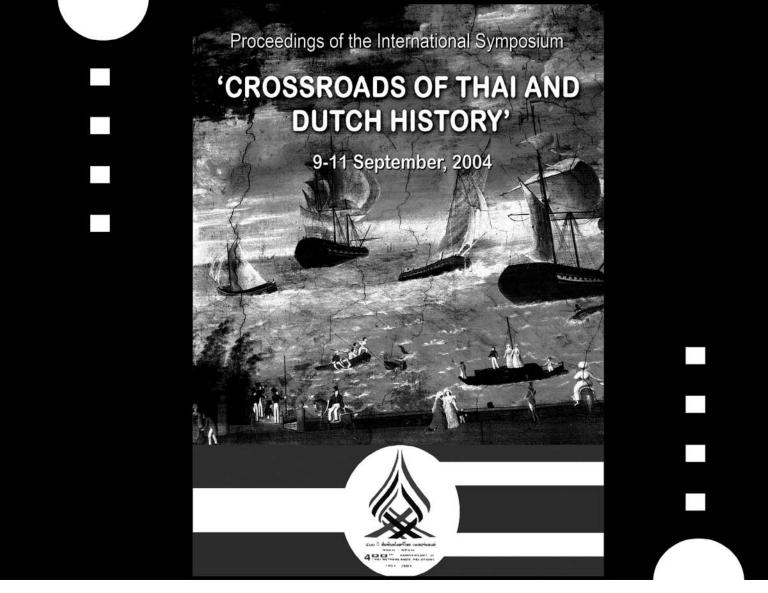
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Photographs and illustration by Sukanya Sharma

Sukanya Sharma is an Assistant Professor in the Dept. of Humanities and Social Sciences, Indian Institute of Technology Guwahati. She teaches Culture Studies, and has worked on cultural affinities between Northeast India and Southeast Asia during prehistoric times for her doctoral research. Sukanya is still continuing her research in this sphere, and has started looking at issues relating to both the historical period and contemporary times too.

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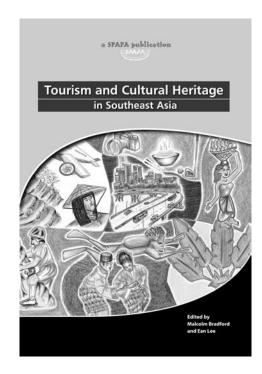
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Adulaya Hoontrakul & Ean Lee

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Rare Cambodian prehistory site destroyed

A 2,500-year-old archaeological site in the Memot region of southeastern Cambodia was completely destroyed in September, news on the Devata website said.

Heng Sophady, a Cambodian archaeologist, inspected the area, and found bulldozers leveling the prehistory site, reportedly to make way for temporary housing for a commercial company nearby.



Cambodian archaeologist Heng Sophady

Located in rural Samrong Village, the ancient site is known as the Samrong Circular Earthwork.

It was discovered in an aerial photo by Professor Yasushi Kojo (Waseda University) in 1997.

The priceless site was destroyed in a few hours.

It was unknown as to who ordered the clearing of the land, but Mr. Heng was informed by site workers that a rubber plantation company would be constructing a new village for workers. The rural region of Memot offers one of the richest sources of information on prehistory development in the country.

The Khmer Empire, which was a major power in mainland Southeast Asia, is believed to have partly consisted of a lineage leading back to the ancestors of the primitive inhabitants of Memot.

Louis Malleret, the French archaeologist who described a series of 17 circular mounds in Memot, initiated archaeological investigation in 1959.

In 1962, the first local excavation was undertaken by Bernard Philippe Groslier, who called the newly discovered civilisation "Mimotien".

The Memot area has its archaeological centre, 'The Memot Centre of Archaeology', which is in Kampong Cham province.

It is a non-profit research unit of the Department of Archaeology and Prehistory of the Ministry of Culture and Fine Arts.

The centre strives to educate local researchers, and train young scholars in excavation, procedures of analysis and treatment, and making site plans.

Source: http://www.devata.org

Oldest evidence of arrows discovered

The earliest direct evidence of human-made arrows has been produced by scientists in South Africa.

"Stone points" dated 64,000 years old were unearthed from ancient sediment in Sibudu Cave.

Researchers believe they were arrowheads, and after scrutiny, the weapons revealed blood and bone remains that indicated their use.

They also think that the arrowheads were fastened to wooden shafts with a plant-based resin because traces of glue were detected.

The find adjusted the dating of bow and arrow development a further 20,000 years back.

Led by Professor Lyn Wadley (Witwatersrand University), the excavation team worked on layers deposited up to 100,000 years ago.

Source: Science Reporter

Fossils of oldest animal remains found

Tiny fossils found in South Australia are believed to belong to the earliest animals ever discovered.

The irregularly-shaped fossils of circles, anvils, wishbones and rings were located in the Flinders Rangers, in rocks dated to 640-650 million years, and are most likely sponges; claims for the oldest animal fossils are at least 70 million years younger.

As the fossils were totally lodged in the limestone, and made of the same material, which is calcite, researchers were unable to extract the fossils; they had to cut thin section and digitally recreate the forms to assess their internal structure.

Previously, the oldest known and generally accepted fossilised sponges are estimated to be 520 million years old.

Source: BBC News

Google art project takes off

Virtual tours on a website of the world's great art galleries are now made possible by Google Street View imaging technology.

Seventeen galleries, including some of the most famous such as New York's Metropolitan Museum of Art, Amsterdam's Rijksmuseum and Madrid's Museo Reina Sofía, are taking part in the Google Art Project.

Cameras mounted on specially-designed trolley strolled through deserted galleries to capture 360-degree shots of the interior of selected galleries, and allow smooth online navigation of over 380 museum rooms.

Over a thousand artworks were photographed in "Gigapixel" high-resolution, which would enable a custom-built zoom viewer to offer views in breathtaking microscopic detail.

The Internet experience is also enhanced by "info panels" that provide brief history of artists, and other information.

Google said it planned to expand the site in the following years.

Source: Bangkok Post

Archaeologists unearth Britain's 'oldest house'

British archaeologists have discovered a lakeside 3.5-metre diameter circular structure in North Yorkshire at the Star Carr site, which is believed to have been occupied by returning hunter-gatherers around 11,000 years ago after the glaciers of the ice age had retreated.

Adulaya Hoontrakul & Ean Lee

Adulaya Hoontrakul & Ean Lee

BBC News reports that the remains were dated by radiocarbon, and the house is believed to be from 8,500 BC, 500 years earlier than the previous oldest house (in Howick, Northumberland).

The discovery of this settlement provides a new insight into the life of inhabitants on this Mesolithic-era site. They were thought to have been very mobile and nomadic. This smaller version of an iron-age round house changes that perception entirely.

It is believed that the house was rebuilt over time, and was inhabited for a period of between 200 and 500 years. This suggests attachment to the site throughout the generations, and there were most likely other similar houses in the area.

Over the decades, the incredibly rare site also yielded large number of items, such as a paddle of a boat, arrow tips, masks and head-dresses. One of the most significant finds is a wooden platform, made from split timbers, which is being considered as the oldest example of carpentry found in Europe.

Archaeologists described the latest find as a 'sensational discovery' that altered the traditional understanding of hunter-gatherers, and opened a new door to the research into European ancestry.

Source: BBC News

Bruegel painting uncovered by restorers in Spain

The Prado museum of Madrid has revealed that a Pieter Bruegel the Elder painting has been found. They were asked by private owners to prove its authenticity, and through an X-ray, fragments of the artist's signature at the bottom of the painting were visible.

The tableau, painted in tempera on linen, is called 'The Wine of St. Martin's Day'. It depicts a great number of peasants scrambling to get some wine from the first barrel of the season, a classic theme for Bruegel.

This large-scale painting, not known previously, dates between 1565 and 1568, and measures 148cm x 270.5cm.

The owners of the painting were not aware of its rarity until they put it on sale last year. It is reported to be worth over 25 million euros in the art market. The Spanish Culture Minister hopes to secure it for the nation at an undisclosed sum.

There are only forty known Bruegels before this discovery, and The Prado has one in their collection, entitled 'The Triumph of Death'.

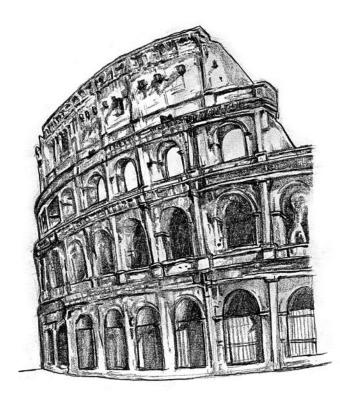
Source: BBC News

3D virtual Monuments and Museums

Images on Flickr websites were used to recreate three-dimensional models of well-known landmarks such as the Colosseum in Rome.

Analysed by a home personal computer, million of photos were compiled to construct detailed models within a day.

Researchers at the University of Washington worked on a personal computer equipped with four powerful graphic cards that were



The Colosseum

instrumental in performing massive number calculations.

The analyses involved studying an object from various viewing angles and distances, and the details of each pixel within the set of photos to examine surfaces.

Virtual museums too are increasing on the Internet, with the complex technology needed to create them becoming more sophisticated.

Graphic designers are today capable of constructing entire museum worlds on the web.

Source: Bangkok Post

Crop marks in fields expose Roman sites

Archaeologists had taken full advantage of the dry weather to excavate Roman camps and pre-historic settlements in England.

Three sides of a Roman camp were revealed in Dorset after sun-parched barley fields grew at different rates, producing marks over settlements buried underneath. Crop marks showed a lightly-built defensive enclosure that protected Roman soldiers in their manoeuvres during the first century AD, the English Heritage reported.

Another Roman camp was found in Newton Kyme, near Tadcaster in North Yorkshire, but compared to the one in Dorset, this larger and stronger fort dates back further at nearly 2000 years.

With dry conditions being ideal, archaeologists have discovered hundreds of ancient sites by aerial surveys. Flying over the Holderness area of the East Riding, about 60 new sites that were mainly prehistoric, along with livestock and settlement enclosures, were located and identified in a single day.

Source: BBC News

Van Gogh theft: Egyptian ministry officials jailed

An Egyptian court has found eleven Ministry of Culture employees guilty of negligence, and sentenced them to three years in jail, with bail pending an appeal.

Art & Archaeology – International

Adulaya Hoontrakul & Ean Lee

After a Van Gogh painting, known both as 'Poppy Flowers' and 'Vase and Flowers' went missing for the second time from the Mahmud Khalil museum, investigations revealed that the alarms on paintings did not function; only seven of the forty-three security cameras were operational, and only one guard was on duty during the theft.

The security problems were allegedly reported but the request for upgrading the system was met with insufficient financial support from the Minister of Culture. The Minister denies the claims.

When the robbery first came to light, two Italian visitors were mistakenly arrested after they aroused suspicions by visiting the toilet, and rapidly leaving the premises soon after entering.

This led to a few ill-informed announcements from the Minister of Culture, one of which was that the painting has been recovered. He later retracted the statement, and the painting is still missing today.

An Egyptian billionaire has offered a US\$175,000 reward for any information leading to the recovery of the precious painting.

Source: BBC News

Italian PM 'enhances' Venus and Mars statues

The Italian Prime Minister has been severely criticised for ordering restoration work on two ancient Roman marble statues.

The restoration practice of Italian restorers avoids restoring ancient works of art to perfection, in contravention of which Mr. Berlusconi authorised the replacement of the missing penis on Mars, as well as the missing hand for Venus.



Venus and Mars

The out-of-fashion restoration approach costs more than 73,000 euros (\$100,00) to carry out, and it clearly upset the prime minister's dissenters, particularly as he had ordered massive budget cuts of more than 40% to Italy's fine arts department as part of an austerity programme.

Previously kept in a Rome museum, the statues of Venus and Mars were moved to the PM's private residence.

Source: BBC News

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SEARCA INVITES APPLICATIONS FOR GRADUATE SCHOLARSHIP IN AGRICULTURE FOR SCHOOL YEAR 2012-2013

The Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA) invites applications for its graduate scholarship (MS and PhD) in agriculture and related fields (including biological sciences, social sciences, economics and statistics, forestry and fisheries, environmental sciences, agro-industrial technology and engineering, biochemistry, and development management) for school year 2012-2013. The scholarship is open to nationals of Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Timor-Leste, and Vietnam who are regular employees of academic or research institutions or government agencies and not older than 35 years old.

Applications may be submitted directly to the Ministry of Education/Higher Education, or to the Ministry where the applicant is employed for preliminary screening. The Ministry where the applicant is employed may conduct preliminary screening of applicants and submit their nominations and the application documents to the Ministry of Education/Higher Education, which will then include the nominees of other Ministries in the final list of candidates accompanied by the complete set of requirements to SEARCA not later than 30 July 2011. Applicants should inquire with their respective Ministries regarding the Ministries' deadline for receiving SEARCA applications.

SEARCA scholars may study at any of the following members of the University Consortium coordinated by SEARCA: Universiti Putra Malaysia, Malaysia; Kasetsart University, Thailand; Institut Pertanian Bogor and Universitas Gadjah Mada, Indonesia; and University of the Philippines Los Baños, Philippines. Other reputable universities outside the University Consortium but within the Southeast Asian region may also serve as study posts of scholars under special arrangements and project agreements. Applicants may apply online via the SEARCA website, but original application documents must still be sent to their Ministry for official endorsement and submission to SEARCA. Applicants are required to submit to SEARCA applications for admission to the Graduate Schools of at least three universities in the list.

The application requirements and forms may study may be downloaded from the SEARCA website at http://www.searca.org.

The topic of the research that the applicants plan to conduct for their thesis must be in line with either of the priority thrusts of SEARCA, namely: natural resource management and agricultural competitiveness.

Interested parties may contact the Graduate Scholarship Department of SEARCA via email at gsd@agri.searca.org or ecc@agri.searca.org.



THE BIENNIAL INTERNATIONAL CONFERENCE ON THE TEACHING & LEARNING OF ENGLISH IN ASIA

As we move into the second decade in the new millennium, it is only apt to look back and reflect on the many changes to the world of English Language Teaching and Learning the past nine years have brought us. At a time when national education systems are going through some of their most dramatic changes, a focus that seems to be universal is to keep its teaching as up-to-date and relevant as possible. English language teachers are expected to adapt their own methodologies to reflect the new reality of a world characterised by technological advancements and globalisation, to make the necessary changes to keep up with the best practices available.

In English language teaching and learning, much has been said about ICT, globalisation and multiculturalism, and they continue to be three major driving forces transforming the way we learn and use the language. We saw change on many levels, from pedagogical approaches and methodologies, resource utilisation, right down to classroom dynamics of the ELT classroom. This information is nothing new but a reflection of the inherent dynamic characteristics of teaching and learning. Yet, change is never easy and certainly always met with some resistance. Indeed, the teaching and the learning of English have never been more demanding.

With ever-accelerating development continuing to influence the changing educational landscape, this conference is here to provide such an avenue - to provide a forum for scholars and educators to continue to exchange views and experiences, formulate strategies, forge academic fraternities, and, all in all, contribute positively towards the continued development of an Asian perspective. The first three conferences made some innovative discoveries, renewed existing modes and strengthened the existing fraternity, and this fourth conference aims to keep our minds open as we make sense of the changes towards a strengthened understanding of how engliosh fits into our individual and collective perspectives. As such it has been aptly themed the 4th Biennial International Conference on the Teaching and the Learning of English: Forging Ahead.

In short, our aims are to enable you:

- To share experiences and develop scholarship on English language education besides forming educational partnership, in the teaching and learning of English
- To establish collaboration in research on the teaching and learning of English

 To establish a global network of scholars and managers of English language education in Asia Sub-Themes

Papers pertaining to a broad array of issues on the learning and teaching in this borderless world are invited. They may include the following:

- · Research in language theories and practices
- · Teaching methodology
- English language curriculum and material development
- · English language assessment
- Asian literature in English language curriculum
- · ICT & English language education
 - ICT in the English classroom Distance learning/ e-learning
- Academia-Industry collaboration-
 - · Excellence in ESL research and teaching
 - · Language teachers' education
 - · Curriculum and methodology
- Globalization and language education Internationalization of curriculum and pedagogy
- Multiculturalism
- · Collaboration in teaching and learning
- Quality assurance and standards in language education

PRESENTATION FORMAT

- Plenary
- · Paper/Workshop/Poster

DEADLINES

- · 31 July 2011- submission of abstract
- 15 August 2011- notification of acceptance
- 01 October 2011- submission of full paper
- 01 November 2011- conference registration

For more information please contact: hn1084@uum.edu.my nyza@uum.edu.my 019 474 9024 019 618 6373













Adulaya Hoontrakul & Ean Lee

'Disgusting' sculpture in public exhibition

Milan city has extended the display of a controversial new sculpture by Italy's famous artist, Maurizio Cattlelan.

The sculpture of a hand raising the middle-finger, entitled 'L.O.V.E.' (more commonly known as 'The Middle Finger'), is in full view at the Piazza d'Affari outside the Milan stock exchange. Strategically placed or not (in view of the proximity to the stock exchange), the artist denies any kind of irony or any anticapitalist message.

Opinions on the art piece are greatly divided; some consider it an insult to Italian art, and some truly appreciate the Carrara marble sculpture.



Symbolic statue created by Cattelan stands in front of the stock exchange in Milan

The debate is now on whether to make the Piazza its permanent home or to move it to Milan's new Museum of Modern Art.

Creating works that challenges and subverts the cultural and social mores and rules, Cattelan is one of Italy's most well-known contemporary artists. He is self-taught, and his provocative art usually mixes sculpture and performance that expresses paradoxes and tests the limits of tolerance through irony and humour.

Source: BBC News

Returned Iraqi artefacts found in PM's office

Over 600 missing antiquities have been discovered in cardboard boxes stored as kitchen equipment in the offices of Iraq's Prime Minister Nouri al-Maliki.

These artefacts are believed to have been a small part of what were looted and taken out of Iraq during the chaos of the US-led invasion. Many were moved back to Iraq but some were unfortunately misplaced upon return.

The 638 items found were jewellery, clay tablets, bronze figurines, and other items. They are all from different historical periods and cities; including those from the beginning of the Islamic era, the Sumerian, Babylonian and Hellenistic periods.

Despite international efforts to track other looted objects down, many have still not been located; tens of thousands dating back to thousands of years went missing during the war in Iraq.

Source: BBC News

'Oldest' images of Christ's apostles revealed in Rome

Art restorers from a Vatican-funded restoration project have uncovered what are believed to be the oldest depictions of Jesus Christ's apostles Andrew, Peter, and John.

Dating from the second half of the 4th Century or the early 5th Century, art historians reckon that these paintings may have influenced later images of Christ's early followers.

Discovered in a tomb of a Roman noblewoman, archaeologists used a new technology through which calcium carbonate deposits, on the surface of paintings, that are formed by humidity and lack of oxygen, are removed by bursts of steam created by the interaction of laser and calcium carbonate.

Apostle Peter travelled in the Mediterranean area in the 1st Century, and wrote letters that are contained in the Bible's New Testament. He was among Jesus' first twelve disciples, along with Andrew and John. This discovery is perceived as an emotional revelation for the Christian faith.

Source: BBC News

Picasso art auction postponed

An auction of Picasso's art works that had been given by Picasso to Maurice Bresnu, his driver, was called off after Parisian police confiscated 271 Pablo Picasso art pieces, and lodged a legal case against Mr. Le Guennec on 'illegal possession'.

Le Guennec, a retired electrician who had installed security systems in Picasso's homes in

France during the three years before the artist's death in 1973, has turned out to be the cousin of the late wife of Maurice Bresnu, who is well known to art scholars as one of the main inheritors of Picasso's works.

Le Guennec claimed that the 271 items were gifts, but the Picasso estate was not convinced as it would be very unusual for the artist to give that amount of his art works to a single individual.

Source: BBC News

US court awards firm for salvaging Titanic artefacts

The US federal judge has ruled that RMS Titanic Inc, a subsidiary of Premier Exhibitions Inc, is entitled to the full market value of the 5,500 artefacts salvaged from the Titanic ship wreckage site.

In 1994, a US court granted the company only the salvage rights to the vessel but not the ownership to the ruins or the objects.

On the 15th of August, 2011, however, US District Judge Rebecca Beach Smith will decide on the issue of ownership of the artefacts. The decision is between selling the objects through the court and transferring the proceeds to the company or to grant it full entitlement to the artefacts within terms and conditions.

Discovered in 1985 by an expedition led by Dr. Robert Ballard, the infamous Belfast-built ship sank on its maiden voyage in April 1912, four hundred miles off the coast of Newfoundland, Canada. The tragedy claimed more than 1500 lives.

Adulaya Hoontrakul & Ean Lee

The RMS Titanic Inc has undertaken over seven expeditions to the wreck site 2.5 miles below the north Atlantic.

The extensive effort in recovering these lost items has been highly praised by Judge Smith. Not only have the company helped conserved a cultural beauty but contributed to evolving marine archaeology equipment as well. They invented twenty specialised retrieval instruments for fragile items on the seabed, including a vacuum and a flat shovel.

The judge also recognised the danger divers face on these excavations. The sea floor pressure reaches 6,300 pounds per square inch, and damage to the hull would be instantly fatal for the divers. She said that RMS Titanic Inc has retrieved objects that would have been damaged or lost to future generations. The artefacts are being exhibited across the world.

Source: BBC News

New York museum repatriates King Tut objects to Egypt

A museum in New York will return to Egypt nineteen artefacts, which were retrieved from King Tutankhamun's tomb.

The items that include a tiny bronze dog and a sphinx bracelet jewel will do a final North American tour, on display at Times Square, New York City, then the Metropolitan Museum, among whose collections the objects were found, before finally returning to Egypt.

In 1922, a British archaeologist Howard Carter discovered King Tut's tomb in the Valley of the

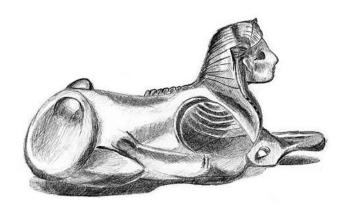


Illustration by Zhou Binyao

Kings, where the famous site continued to be excavated for the decade following the sensational find.

An agreement was made at the time with Egyptian authorities that no objects from the tomb were to leave Egypt.

The artefacts to be returned are suspected to have had been illegally exported; they came into the museum's collection because Carter's house in Luxor, Egypt, was bequeathed to the museum.

The boy king reigned between 1336 and 1327 BC, and died suddenly as a result of what scientists believed was malaria.

Source: BBC News

Illustration by Sakulchat Chatrakul Na Ayutthaya except on this page

