

Aspects of Music Research in Asia in the Twenty-First Century – Connections between Mainland Asia and Island Southeast Asia

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Abstract — *In Asia, the varieties of music range from the most ancient traditions, from playing bamboo and wooden musical instruments, bronze drums, bronze gongs and singing epics, alternating songs and ritual chants associated with the world of nature and the spirits, to the most current techniques of music-making in the electronic age. This paper explores the use of many sources of materials for music research in relating music histories of Mainland Asia and Island Southeast Asia by drawing from the rich corpuses of research data in music studies. Three fields of research are discussed: data from field music research in Asia especially in the areas of archaeology, genetics, linguistics and ethnography.*

Keywords – *Southeast Asia; Music; Archaeology; Genetics; Linguistics; Ethnography*

I. INTRODUCTION

The growth and expansion of maritime trade from the first century to the 16th century altered the musical landscape of Asia, from earlier Austronesian and Austroasiatic migrations, to the early contacts with India, China, Arabia and the continuing navigation towards the Pacific and Oceania. During this period Chinese chronicles wrote in the tenth century that peoples from the south called *Luzoes* (Luzon, Philippines) had invaded its southern shores (Scott 1990), while Indian histories recorded the travels of Indonesians to south India. Languages from Borneo have spread towards Madagascar by the tenth century (Wheatley 1961). A trade centered on beads, tin, copper, pottery, ceramics and natural products and food carried musical instruments and musicians bearing new ideas in music making and ritual life.

II. MUSICAL EXCHANGE IN ASIA

Recent researches in the archaeology and history of Asia had focused on the role of the sea and maritime trade as sites of musical exchanges and transmissions linking Southeast Asia with China, India, Africa and the Mediterranean to the west, and with Oceania and the Americas to the east. This metageography maps a history of music in human civilization linking all the continents into one world system. In Asia, ancient musical cultures date back to the Neolithic Period, when bamboo and wood were associated with rice, ancestral veneration and shamanism. Although it is possible to establish parallels in the manufacture of Chinese Shang bells, Dongson bronze drums, Northern Luzon gangsa, Maguindanao kulintang and Javanese gong aging, more studies in the metallurgy of high-tin bronze and the archaeology of musical practices are indeed pressing today. By the time flat gongs and bossed gongs had appeared in the Philippines, Indonesia and central Vietnam, technologies of manufacturing high-tin quenched bronze were already known in India, Thailand, Borneo, Java and China.

Very little is known today about musical exchanges between China and the Philippines. Musicians from Java, Burma and Vietnam, as well as from central and south Asia, visited the Tang court, and these musical exchanges reached an apex during the Ming dynasty, during which embassies and missions from various countries in Asia exchanged trade items with China and returned with silk and porcelain. In these exchanges, musical ideas were also circulating within Asia. Early Spanish accounts from the sixteenth to the eighteenth centuries described performances of Chinese rituals and theatrical plays along the Pasig River, in Manila, Laguna and Cavite. Trade relations between the Philippines and China date back to the first millennium, C.E, and ships from China continued to sail to Manila to provide silk and porcelain for the Galleon trade during the Spanish colonial period. Several excavated Chinese, Indian, Javanese, Thai and Vietnamese shipwrecks dating from the tenth to the sixteenth century were found with flat gongs and bossed gongs (Nicolas 2007, 2009).

Musical exchanges between India and Southeast Asia may have been initiated during the early maritime trade exchanges as early as third or second century BCE. Beads, cloth and bronze tools are known to have been circulating between Taiwan, the Philippines, Southeast Asia, India and Africa (Hung 2007). The first contacts with India were concentrated along the western coasts of Burma, Thailand, West Malaysia, Sumatra, and farther on to Cambodia, Vietnam, Borneo, Sulawesi, Java and Bali --- some of these routes were already known through Arab and Persian navigators. With the spread of Hinduism and Buddhism to Asia, a new music culture emerged, centered primarily in

temples and courts, which cultivated a music separate from mountain villages in the many islands of the Philippines and Indonesia and which were not influenced by Indic thought. A more detailed study of such exchanges will partly map the extensive maritime musical exchanges in Asia in prehistoric times. For example, recent excavations in Muara Jambi (Sumatra, Indonesia), Lembah Bujang and Sungai Petani (Kedah, Malaysia), and Nakhon Si Thammarat (Thailand) reveal a continuous line during the first centuries of the first millennium of temple building with the spread of Buddhism and Hinduism in this region. During this period, I-Tsing, the Chinese monk and scholar traveled from China to India, lived in Sumatra to study sacred texts and chants, where a Buddhist center was flourishing.

III. BAMBOO MUSICAL INSTRUMENTS

If indeed the Austronesians had settled in northern Philippines by around 4000 BCE or before, and produced a Neolithic culture of bamboo and rice cultivation, the varieties of bamboo and wooden musical instruments in highland northern Luzon today may have their origins during this period, and may have spread southwards, following the migration of the Austronesians towards Indonesia and the Thai-Malay Peninsula by 1500 BCE. The spread of musical terms, musical instruments, vocal music and music structures are, however, not synchronous with each other. Inter-island exchanges within what is now the Philippines and Indonesia, and maritime routes between China and the Mediterranean were musical paths that need further studies. Within the mainland itself, the movement of language populations may have implications for musical change and exchanges. Comparative musicology and genetic studies can therefore engage in a study of cognate musical terms to trace the histories not only of the musical terms themselves but equally important, the music structures and styles, and their cultural and social milieu. The theory that Austronesian dispersals by way of Taiwan to northern Luzon invites further consideration.. Most significant are the various terms used for bamboo musical instruments whose antecedents are not to be found in Taiwan, since tropical conditions in that island differ from Luzon. These bamboo musical instruments --- stamping tubes, half tube percussion, two stringed zithers, polychordal zithers, xylophone staves, bamboo pipes --- are also found in Java, Bali, in west Malaysia among the Orang Asli, and in many parts of South China, up to Assam and India, where in these regions, gong cultures had also developed. The music of bamboo musical ensembles had disappeared or had been replaced by a new music after the appearance of gongs. Imitative music of this kind can also be found in Java and Bali, and as well as in some parts west Malaysia (Nicolas 1987, 1994). The varieties of bamboo musical instruments in Asia are evidence of an older music culture before the appearance of bronze musical instruments. For example, bamboo stamping tubes have a wide distribution among the Akha in the northern parts of Burma, Thailand, Laos, south China (Vorreiter 2009), in Vietnam (Haudricourt), among the Kalinga and Tingguian in northern Luzon (Nicolas 1989, Maceda 1998), in west, central and east Java (Kunst 1978, Nicolas 1987), and in Bali (McPhee 1976, Bandem 1983) and among the orang Asli in West Malaysia (Nicolas 1994) which are played in various ritual and ceremonial contexts, and have survived after the entry of flat gongs and bossed gongs. With the development of metallurgy, gongs had become more widespread, valuable and more prestigious, and thus had evolved into a new aesthetics.

IV. GONGS

The earliest archaeological site with bossed gongs found in Butuan, northern Mindanao can be dated in association with a 12th century carbon dating of the boat and trade ceramics in which these were found, although other dates of 3rd century and 16th century were confirmed (Dizon and Ronquillo 2010). Stylistic features of Vietnamese ceramics in Butuan likewise place the date to around 11th century, with possible trade links with Hoi An (Burns and Brown 2003). In 1974, as we were notating the score of his composition for radio stations, Ugnayan, Professor Jose Maceda suggested that the archaeology of gongs be studied with the distribution of trade ceramics in Asia. Indeed, these shipwrecks containing gongs, cymbal and bells carried trade ceramics from Burma, Thailand, Cambodia, Vietnam and China. Bossed gongs are well represented as well in temple reliefs in Cambodia and Java dating to as early as the 12th to 14th centuries, about the same period when bossed gongs begin to appear in shipwrecks from Thailand to Vietnam, Sumatra, Java, Borneo, Palawan and Mindanao. A bas-relief of eight gongs-in-a-row similar to the Mindanao *kulintang* is illustrated in several panels the Angkor Wat in Cambodia, dated 13th century, while in Brunei, a 14th to 15th century site yielded *gulintangan* fragments that may have been used as ritual offerings, buried together with Ming, Sawankhalok and Sukhotai ceramics.

Early contacts between East Asia, South Asia and Southeast Asia, and the migrations of the Austronesians, Austroasiatic, Mon-Khmer and Tai-Kadai were precursors to the spread of Indic and Sinic ideas to Asia that introduced into Southeast Asia Hinduism and Buddhism, the dewaraja cult, a new philosophy, the architecture of temple systems, and literary and inscriptional writing. Indian writing provided various sources that refer to East Asia, and documented that Indonesian sailors have reached Sri Lanka by the first centuries, C.E. (Wheatley 1961: 16-17). Some six thousand years ago, the Austronesians started a journey and sailed thousands of miles from their home islands reaching as far as

Madagascar in east Africa to the Easter Islands of the Pacific. In these trans-maritime journeys, we know very little about the spread of musical ideas that may have reached India and China from the centers of Austronesian migrations since the third millennium, BCE.

From the first centuries, C.E., the more important relations between Southeast Asia and India can be found in the sastras (religion, scripts, literature, politics, law) and architecture (Coedes 1968:254-56), while that of China, Korea and Japan, in music structures, musical instruments and ensembles (Picken et al 1981-2000, Maceda 1995). The courts and temples of Southeast Asia, after an extended period of adapting Hindu and Buddhist rites and ceremonies, developed a parallel repertoire of music for court ceremonies, separate from the repertoire used for religious rites in the temples. In Java and Bali, the extensive use of musical forms, musical instruments and vocal music attested to in Old Javanese and Old Balinese inscriptions, literatures, and in temple reliefs (Kunst 1968), as can also be found in Myanmar, Thailand, Laos, Kampuchea, and Vietnam, are early records of music in the area. Religious transformation allowed for the reworking and recasting of old rites into new forms suitable for Hindu or Buddhist ceremonies both in the temples and in the courts. The manifold reworking of rites and ceremonies, and how the musical arts were integrated into these systems has yet to be described and analyzed ---- what indigenous structures were perceived to be malleable for new Hindu and Buddhist liturgical forms, and how these were all incorporated into the ritual repertoire of both the courts and the temples and other sacred sanctuaries, and what musical, theatrical or dance forms were integrated into these systems.

V. THREE DISTINCT MUSICAL AREAS

In these contexts, the musics of Southeast Asia developed into at least three distinct areas: first, the village which until today remains to be the repository of ancient religious and musical practices; second, the courts; and third, the temples, which together established a new form of centralized organization and power, and consequently assumed the position as centers of musical activity, where musicians and dancers, players and puppeteers were employed in the service of the ruler, the aristocracy and the religious hierarchy. A new music culture based on ritual developed concurrent with monument building and the institution of the dewaraja cult. However, while primary Indic rites were central to temple activities, indigenous rituals, music and dances were utilized to construct new ritual procedures. Likewise, a new temple system and a new music culture then emerged after the introduction of Hinduism and Buddhism (Nicolas 2007).

The spread of Sanskrit language began from across the Bay of Bengal into the Asia, although contacts between the western mainland of Southeast Asia and India had existed since prehistoric times. Not all of Asia, however, was transformed by Buddhism and Hinduism, notably minimal in the Philippines, Borneo, Sulawesi and the eastern Indonesian Islands. Thus the term "Hinduization", or "Indianization" or "Sanskritization" (Hall 1981:12; Coedès, 1968:15-16) can not be applicable to the whole of Asia. But over the past several decades, these models of representation Southeast Asia as a recipient of influences from India, China, the Middle East and Europe had been challenged, and the turn to focus on indigenous histories and cultures points to more complex and more heterogeneous, multifaceted area. Indeed, the idea of Southeast Asia is now reconstructed as a geographic entity, rather than a classic "culture area", as more and more studies define and differentiate each of the disparate units comprising it.

The Burmese, the Thais, the Lao, The Khmers, the Chams and the Viets who occupy the vast continental area between the borders of the Himalayas and the shores of the mainland Asia, had continually engaged in musical exchanges over the past two thousand years, amidst the spread of populations, wars and trade exchange. The changes in frontiers and boundaries over the past two thousand years have produced dualities in music cultures : the Tai in South China, Thailand and Laos; the Thais and the Malays in Patani and Kedah; the Thais and the Khmers in northeast Thailand; the Chams in Vietnam and Cambodia; The Mon in Burma and Thailand; the Karen in Burma, Thailand and south China; the Burmese in Burma and north Thailand, and many more. This overlapping spread of populations in many ways defined and produced diverse music cultures, a phenomena that has its roots and origins in prehistoric times when the populations speaking Tai-Kadai, Austroasiatic and Tibeto-Burman languages had slowly inhabited the area.

VI. MARITIME ROUTE LINKING AFRICA, ASIA AND OCEANIA

An expanding international trade which, from about 2000 years ago, greatly increased contact between India to Southeast Asia, and beyond to the Middle East and to the Mediterranean. The Austronesians were known as maritime navigators since prehistoric times which spread from south China to the Philippines, dividing into major groups --- a westward group that left for Borneo, Indonesia, west Malaysia and Madagascar, and an eastward group that sailed to eastern Indonesia and to Oceania.

In another recent article, Southeast Asian nephrite (jade) artifacts, many archeologically excavated, dating from 3000 BCE. through the first millennium CE. provide evidence for one of the most extensive sea-based trade networks of a single geological material in the prehistoric world. Green nephrite from eastern Taiwan were distributed, between 500 BCE and 500 CE, through the Philippines, East Malaysia, southern Vietnam, and peninsular Thailand, forming a 3,000-km-diameter linkage around the southern and eastern coastlines of the South China Sea. Other Taiwan nephrite artifacts, especially beads and bracelets, were distributed earlier during Neolithic times throughout Taiwan and from Taiwan into the Philippines (Hung 2007).

VII. BRONZE DRUMS, FLAT GONGS, BOSSED GONGS

Over the past several decades, studies in the musics and music histories of Asia have focused on several important aspects. Music histories on Java (Kunst 1968, 1973; Sedyawati n.d.), and China (Wu Zhao), among others, demonstrated the importance of the use of archaeology in reconstructing the history of music. In two separate but concurrent studies in the 1980's. Ardika published his MA Thesis on Sembiran, Bali in 1987, establishing among other things, the local manufacture of bronze drums in Bali by the first century, CE (Ardika 1989). Bennett-Kempers (1988), in a study of the morphology, stylistics and decorative features of bronze drums in SEA, concluded that Bali as a center of bronze manufacture, extending the area to Java that produced mokos, whose distribution extended to Sabah, Kalimantan and Alor. Bennett-Kempers further concluded that the bronze drums found in Java (about 20 of them, so far) and those of Sangerang and other islands are of Heger I type and were mainly brought by the Vietnamese traders who, at the height of new Chinese domination in Vietnam, had fled the capitals and sailed towards the islands of Java, Bali, the eastern Indonesian islands, forming a group of aristocrats who fled and found new islands where a culture of headhunting, ancestral worship and bronze drum playing was flourishing.

This was to change when flat gongs were introduced much later, at least around the tenth century or earlier, and bossed gongs before the 13th century. In Pandanan and Butuan, Chinese and Vietnamese ceramics, as well as Burmese and Thia, as far as Java where Vietnamese ceramics are decorated on temple walls. Gongs borne by Thai, Sumatran, Javanese, Philippine, and Chinese ships might have passed by other ports of call to collect trade goods, including gongs in Vietnam or Thailand before proceeding to Indonesia and the Philippines. A direct route from Vietnam to Luzon and Butuan in the 10th century was highly probable. Gongs were still transported but by smaller vessels. How these artefacts from the 10th to the 17th century connect to contemporary practices require further studies (Nicolas 2009).

The ritual uses of gongs in Asia can be gleaned from the various illustrations in bas reliefs in Hoysala in India, where flat gongs are played with double headed drums in dancing postures (Deloche 1988), in Angkor and Baphuon where gongs are played as these are carried by two men on a suspension pole over their shoulders and in several temples in east Java. These all show that gongs were played in processions, common to many parts of Asia today, from India to Thailand, Philippines (*agung* in Basilan, *meglebu pangantin*) and Sulu, bridal processions), Borneo, Java (*gamelan sekaten*) and Bali (*gong baleganjur* for cremation rites and ritual processions). In earlier times, gongs were played in boats associated with the dead in Borneo as illustrated in bark cloths and wooden boards (Bennett Kempers 1988), reminiscent of ancient rites for the dead where the souls journey in boats to the other world as illustrated in the 8th century BCE Manunggul jar in Palawan, and much earlier, in bronze drums in DongSon.

There are presently nineteen sites with identified musical instruments in maritime archaeological setting, the chronology of which may be divided into two general periods. The first period covers the ninth to the thirteenth centuries, CE, during which cymbals, bells and flat gongs appear in maritime and inland archaeological sites. The second period begins in the thirteenth century up to the seventeenth century, CE, during which bossed gongs dominated the maritime records in shipwrecks and buried boats along the coastal regions. These sites are found from Luzon to Sumatra, Thailand and Vietnam --- located along the principal maritime trade routes that connected Asia with Africa and the Mediterranean. The dating of the shipwrecks is based primarily on the ceramics and tradeware in these ships, radio carbon dating and dated coins. Three types of gongs are found in these shipwrecks: 1) flat gongs with narrow, straight rim; 2) bossed gongs with low boss and narrow, turned-in-rim, and 3) bossed gongs with low boss and narrow, straight rim (Nicolas 2009).

The transport of gongs, flat or bossed, continued on after the seventeenth century and twentieth century ethnographic studies confirm a continuity of trade and exchange along a number of these routes. The diverse types of gongs in these shipwrecks and other sites as found in the Philippines and Southeast Asia attest to the variety of gong music playing as early as the 10th century. Flat gongs are illustrated in the temples in Amaravati (7th c.) and Hoysala in India (12th –13th c.), and in Baphuon (12th c.) and Angkor in Cambodia (11th-13th century). Bossed gongs however, are not carved on the reliefs of the 9th c. Borobudur and Prambanan temples in Java, but are found much later in the bas reliefs in the temples of Kediri (early 13th c.), Panataran, Ngrimbi and Kedaton in East Java (14th c.) and Sukuh in Central Java (15th c.). The

14th century. Javanese panegyric poem, Nagarakertagama already mentions the term gong, but this term is not known in Old Javanese and Old Balinese inscriptions dated 8th to 15th centuries, CE.

The Pandanan gongs are very much similar to the sanang of the Pa'lawan people on Palawan Island, and such gongs are used today for music making and ritual offerings. These bossed gongs are flat faced, with no concentric rings. Smaller bossed gongs with narrow, straight rims, similar to the Royal Captain gongs but without the six-point star designs, are more common today in Mindoro (*agung*, Hanunuo), Mindanao (*agung*, Tiruray and Manobo) and in the villages in Java (*bende*). These ensembles play a music where one person beats one gong, all five or six players of which produce melodic drones or ostinato. Such a style of playing is utilized by flat gongs in highland northern Luzon. Flat gongs and bossed gongs played in unison, but are tuned and do not play melodies are practiced today in Yunnan, south China, in highland central Vietnam, in central Thailand (*khong*). In Manila, a set of ten to thirty flat gongs (*lam luo*) is played with bossed gongs and drums in Chinese funeral processions (*koh pua che*), similar to practices in Singapore. A comparative study of the spread of Chinese music in Southeast Asia is still in its infancy (Tan Sooi Beng 2007; Miller and Chonpairot 1994; Miller 2010; Nicolas 2007, 2010a).

The bigger gongs with about 54 to 60 cm in diameter in the Butuan, Pandanan, Brunei and Lena Shoal sites are particularly significant in the context of contemporary music practices. Gongs with a low boss and a diameter of about 60 cm, and a wide, turned-in rim width of 15 cm are rare in Mindanao and Borneo today. What are common are the contemporary *agung* type, with high boss of 7 cm, about 30 to 50 cm in diameter and 20 to 30 cm. turned-in rim width. No *agung* type had been so far found in these shipwrecks, suggesting that these are a different type of gongs circulating between Mindanao, Palawan and Borneo. Moreover, the term *agung* is known in at least 20 language groups in southern Philippines, with about fifty or more other individual names for other gongs of the same type. The Mindanao-Borneo *agung* type is also not found in Java and Bali, where larger gongs, called *gong agung*, of up to a meter in diameter, with low boss and a wide turned-in rim of about 25 cm. are played in the courts and large temples.

Gongs called *agung* (spelled *aghon*) in Pigafetta's 1521 account may have come from Borneo, but were borne by Chinese ships, although Pigafetta recorded that these were made in "Signio Magno" or China. The ensemble consisted of one big *aghon* played with a pair of these gongs, a drum and a pair of cymbals. These gongs might be similar to the contemporary *agung* or *egung* in Mindanao and Borneo. Gong and drum ensembles are common in this area, but cymbals are not used in gong ensembles in the Philippines and Borneo today but are very important in Burma, Thailand, Laos, Cambodia, Vietnam, West Malaysia, Java, Bali and Lombok. A seventeenth century Spanish account mentioned the *culintangan* (small bossed gongs-in-a-row) played together with *gimbao* (drum, known today as *gimbal*) and an *aghon* on Mindanao, accompanying trance ceremonies. If the gong fragments from the archaeological site at Sungai Lumut, Brunei are of the *culintangan* type, then this type of gong was already known by the 14th century on Mindanao and Borneo. Finally, the term *mongmongan* (bossed gongs) was known in central Luzon from seventeenth and eighteenth century Spanish dictionaries, and *mong* is a more widespread term for gong in mainland and island Southeast Asia today.

From the colonial Spanish accounts to a number of contemporary ethnography, these gongs are said to have come from China, but such accounts did not qualify whether these were mainly Chinese ships of recent voyaging or may have come down as lore from the oral histories. While there were indeed written records of gongs in early China and India, the rest of Southeast Asia did not produce written documents for such musical phenomena until much later. Gongs in China are of different shapes and profiles, known in various local names which are not known in Southeast Asia. Despite the importance of Chinese trade in maritime Asia, the presence of Chinese temples and the documented musical activities in Chinese communities, very few musical terms of Chinese origins can be found in Southeast Asia. Today, gong manufacturing is known in Borneo, Java, Bali, Burma, Laos, Thailand, West Malaysia and Vietnam. One characteristic of these gongs is their high-tin content ranging from 15 to 25 percent, with prehistoric precursors in India, Thailand, Vietnam and China. Such an alloy might partly determine their survival in ocean salt water, mud and soil. Metallurgical analysis will further explain why for instance, flat gongs in the Tanjung Simpang wreck had survived since the tenth century (Nicolas 2009).

VIII. GENETICS, ARCHAEOLOGY AND MUSIC HISTORY

Several recent advances in the genetic studies of population movements in Asia provide music historians with perspectives in tracing the spread and distribution of musical artefacts, musical languages and music traditions. Multi-directional migrations of populations in Asia (Karafet 2010; Oppenheimer 2008) and studies on Y-chromosomes point to a link between populations in East and Southeast Asia, with the latter being proposed as the source of East Asian populations (Ding, et al 2000; The HUGO Pan-Asian Consortium 2009). The peopling of Asia can be traced in terms of centers of dispersal, the direction of movement, and the time frame of these dispersals (Tabbada 2010), providing music historians with long-term framework for writing a history of music in Asia.

A recent study of the genetic profile of Austronesian groups confirms the generally accepted dispersal of the Austronesian language family from Southeast Asia to Oceania to the East and the Indian Ocean to the West. Results indicate that while Madagascar derives 66.3% of its genetic makeup from Africa, or 33.9 from Southeast Asia, a clear connection between the East African island and Southeast Asia can be discerned. The data suggest that although geographic location has influenced the phylogenetic relationships between Austronesian populations, a genetic connection that binds them beyond geographical divides is apparent. (Regueiro M, Mirabal S, Lacau H, Caeiro JL, Garcia-Bertrand RL, Herrera RJ 2008). Such studies are too far remote for our consideration regarding music history and archaeology, yet as early as the twentieth century, music studies establishing the connections between bamboo xylophones and their tuning scales for Madagascar and Java.

Recent archaeological and genetic studies on the Philippines and Indonesia provide music historians a long-term perspective on the histories of musics in Asia tracing migrations, population movements, language shifts and musical shifts. The Callao Cave in Cagayan, Luzon, Philippines yielded a human third metatarsal (footbone) dating to a minimum age estimate of 66,700 years ago, the oldest known human fossil in the Philippines (Mijares et al, 2010). Three studies on genetics in three areas of maritime Asia --- Champa, Bali and the Philippines provide a working model for a reconstruction of language and music history.

The Cham today speak an Austronesian language, and the Kingdom of Champa lasted for more than one millennium with a zenith from the sixth to the tenth century CE and once ruled over the coastal plains and the interior highlands in Central Vietnam. Although the linguistic link between Austronesian and Cham are of recent development, the Chams possess a closer genetic affinity with the Mon-Khmer populations in Mainland Southeast Asia (Cambodia and southern Thailand) than with the Austronesian populations on Island Southeast Asia (Min-Sheng Peng, et al 2010). If a language shift had occurred, it may have incurred also a shift in the use of new language for vocal music, that is possibly from a Mon-Khmer language to an Austronesian language. Some of the stylistic features of Cham temples combine Austronesian and Austroasiatic elements (Tranh Ky Phuong 2006) and further studies on the musical instruments and dance bas-reliefs on the temple walls will provide such links. Much later, tenth century Cham ceramics had been found in Butuan, north Mindanao (Burns and Brown 2003), while Cham and Philippine scripts may have shared similar origins (Wade 1993).

Tracing the South Asia-Southeast Asia routes of population movements, two haplogroups on Bali point to an Austronesian migration from 4,400 to 5,630 years ago, and an Indian presence some 2,600 to 3,100 years ago. The Balinese mtDNA composition suggests that 83.7 percent of the gene pool are indigenous to the place and can be traced to the Austronesian roots from the north, (that is from Taiwan, via the Philippines). A 12% paternal gene group can be traced to an Indian pool (Karafet et al 2005). The discovery of a clay mould to manufacture bronze drums in Sembiran on the north coast of Bali is dated to the first century CE, according to the associated find of a fragment of a volcanic tuff stamp or mold that is identified as part of a stamp used for impressing decoration into wax in the production of bronze drum of the Pejeng type. Ardika found clay mould fragments for bronze drums dated in association with one Indian rouletted ware bearing Kharoshthi script known in the area of Arikamedu, northwest India, used from about 300 BCE to 400 CE. The presence of Indian trade pottery in Sembiran indicates the position of Bali as the “furthest-flung identified node” in a trade network linking Indonesia to China, India and Rome by the 1st century CE and antedating the appearance of the first kingdom around 800 years after.¹ These all are in agreement in the way Sanskrit, which was brought to Java and Bali by Hindu Brahmins, had been used for rituals and vocal songs, while the Balinese and Javanese languages developed into a highly complex literary and courtly language with epics and songs sung in the Sanskritized vernacular and their subsequent indigenization.

Philippine mtDNA pool has a high 95 percentage consanguinity with Taiwan groups, considered to be the home of the Austronesians. Philippine mtDNA types are mutually shared with Taiwanese groups, which belong to haplogroups of post glacial and pre-Neolithic origin, previously identified in East Asian and Island Southeast Asian populations. (Tabbada et al. 2010). Yet by the sixteenth century, Spanish colonial documents attest to the musical shift from indigenous music systems in Luzon and the Visayas to the European idiom. Musical shifts, or the adaptation of a music hitherto unknown to a community or society, may be similar to language shift. Ancient indigenous musics in the Philippines disappeared after Spanish colonization from the late sixteenth century and were replaced with a music based on European scales, melodies and harmony, with only about ten percent of the population able to preserve that older Asian heritage, as these communities were isolated in the mountain regions of northern Luzon, Mindanao, Palawan and Mindoro.

IX. A CHRONOLOGY OF A HISTORY OF MUSIC IN ASIA

Based on the above discussion, the following can be proposed as a chronology of a history of music in Asia.

1. The migrations of the Austroasiatic, Indo-Dravidian, Sino-Tibetan, Hmong-Mien, Tai-Kadai, Austronesian, and Oceanic language groups, [comprising more than 3,000 languages with over 3 billion speakers today] and the use of these languages in vocal music, in the form of chants, epics, love songs, alternating songs and ritual music and the early musical exchanges among the peoples of Asia through maritime and inland trade routes.
2. The use of bamboo, wooden and other natural materials for musical instruments in the form of bamboo tubes, bamboo slit drums, flutes, pipes, wooden percussion logs, pairs of sticks, rattles, xylophone blades and bars, among others.
3. The use of bronze in the manufacture of bells from about the third millennium BCE, bronze drums from about mid-first millennium BCE, and flat gongs and bossed gongs before or after tenth century CE.
4. Within the vast varieties of cultures, languages, religions and music of Asia, the spread of Indian and Chinese religions in Asia, the construction of temple and court complexes that gave rise to a new aesthetics not only in music but also in architecture, language and literature, from the beginning of the first millennium, CE, and thereafter, the arrival of Middle Eastern religions, contributing new ideas into the music cultures of Asia. While India, China and the Middle East provided new music structures and practices, little is known about how the rest of Asia had exchanged with or introduced musical ideas into India, China and the Middle East.
5. The European conquest of Asia and the introduction of Christianity brought in European music and aesthetics, beginning in the mid-sixteenth century and continuing into the contemporary period.
6. The twentieth century ushered in a global movement of ideas in music, and the invention of digital technology and the marketing of music as a commodity that have threatened the existence of the diversity of music cultures all over the world.

X. SOME CONCLUDING REMARKS

The appearance of gongs from at least the tenth century or earlier created a new music culture in Southeast Asia, a precursor to the earlier movements of musical ideas from the early migration of the Austronesian and Austroasiatic speakers, the spread of bronze drums, and antedating the introduction of European music in the age of colonialism in the sixteenth century. It is still quite difficult to trace which island became the first recipient of any given musical idea, in an area as diverse and complex as Asia. Early trade provided an impetus in the development of new musical ideas and in the intensification of musical activity in both court and temple centers and in mountain villages that are the repositories of ancient musical ideas in the region. Future archaeological, genetic, linguistic and musical research will furnish more details on the movement of musical ideas in the context of musical exchange in Asia.

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