Abstract

The Semelai are a group of Orang Asli (orang: people; asli: original) who reside in the forests and along the banks of the rivers surrounding Lake Bera, a natural lake located in the southern central lowlands of peninsular Malaysia. Lake Bera is a freshwater swamp system that supports a diverse community of biological life. The lowland forest surrounding the lake is home to many animals, birds, fish, reptiles and insects native to Malaysia. The instrumental music of the Semelai is inspired by the biophony of the lake and forest ecosystem. This article discusses the relationship between Semelai instrumental music performed on the rebab (bowed lute), keranting (plucked bamboo zither), ginggong (bamboo jew’s harp) and gambang (wooden xylophone) with the biophony of Lake Bera. I argue that Semelai instrumental music is a creative imagination of the original biophony at Lake Bera. Strumming, plucking or striking on acoustic bamboo and wooden instruments at their house verandah during evening recreation sessions, the Semelai musicians juxtapose, integrate and intersperse an additional layer of sound to the polyphonic texture of sounds already inherent in Lake Bera.

Keyword: biophony, Orang Asli, Lake Bera, instrumental music, Semelai
Introduction

The Semelai

The Semelai are one among eighteen groups of indigenous people, collectively known as the Orang Asli \textit{(orang}: people; \textit{asli}: original) of peninsular or west Malaysia (Andaya, 2002; Bellwood, 1997; Nicholas, 2000) Their villages are located between the borders of Pahang and Negeri Sembilan. The Semelai live near the banks of rivers and in the forests surrounding Lake Bera. Their settlements can be found along the banks of the Bera River, Teriang River, Paya Besar, Paya Badak, Serting River, Lui River and Ulum Muar in Pahang (Figure 1). The primary occupation of their ancestors were hunting, fishing, foraging, gathering, swidden farming and trading of forest and lake resources. The Semelai plant sugarcane, maize, tapioca, bananas, sweet potatoes and vegetables (Hoe, 2001, p.20). They also gather forest produce such as rattan; resins such as \textit{damar} and \textit{keruing}, resin and medicinal herbs including \textit{tongkat ali} and \textit{kacip Fatimah} (Hoe, 2001, p.27).

There have been difficulties in categorising the Semelai people into any of the three Orang Asli groupings: Negrito, Senoi and Aboriginal Malay. This is because their language has affiliations with the Austroasiatic or Mon Khmer language family but their physical features, social stratification, culture and practices manifest features from the ‘Aboriginal Malay’ group. Today, they are grouped under the ‘Aboriginal Malay’ category (Bellwood, 1997; Hoe, 2001)

During the Emergency period (1948-1960) in Malaysia, the government launched a resettlement programme that relocated many scattered Semelai villages into a large area known as Pos Iskandar, located at the southwest corner of Lake Bera. Pos Iskandar consists of five main villages; namely Kampung Pa’apa, Kampung Putat, Kampung Kampung Gau, Kampung Keruing and Kampung Genderek (Hoe, 2001, p. 10). Today, the Semelai live in permanent village settlements and earn wage incomes from various jobs. Some Semelai own sundry shops while others are factory workers or labourers for the timber companies and oil palm plantations (Santharamohana, 2003, p. 5).

\begin{center}
  Figure 1 \hspace{1cm} Location of Lake Bera, Pahang (Source: Google Maps)
\end{center}
Lake Bera

Lake Bera is a natural lake located 35°N, 102 38’ in the southwestern corner of Pahang, near the eastern border of Negeri Sembilan in Peninsular Malaysia. It is an alluvial peat swamp ecosystem that consists of freshwater and lowland forests habitats located in the central lowlands of Peninsular Malaysia. The areas surrounding Lake Bera consists of a myriad species of endemic flora and fauna including fish, birds, animals and plants. There are 374 plant species, approximately 230 birds, 10 turtles, 68 mammals, 33 invertebrates, 19 amphibians and 94 species of fish, some of which are only found in this remote part of the world (Prentice, 2018). Aquatic plants such as lotus, *Nelumbo nucifera*, water lilies, *Nymphaea indica*, bladderworts and *Utricularia* are found in the open waters of Lake Bera. The Purple water trumpet, *Cryptocoryne purpurea* (*Hati-hati paya*) is an endangered species in Lake Bera. Screw pine, *Pandanus helicopus* and Tube sedge, *Lepironia articulata* dominate the lake. Burning and clearing of screw pine and tube sedge by the Semelai people to maintain their waterways and hunt turtles have created a mazelike structure whereby plants are interspersed between open water and narrow waterways. (Furtado & Mori, 1982).

This habitat includes endangered rare species like the Asian arowana, *Scleropages formosus* (*kelisa*); Giant catfish, *Wallago leeri* (*tapah*); Giant snakehead, *Channa micropeltes* (*toman tarung*), Common snakehead, *Channa striata* (*haruan*); River catfish, *Hemibagrus nemirus* (*baung kunjii*); and Giant gourami, *Ophronemus goramy* (*kalui*). Besides fish, the lake is also home to soft-shelled turtles, terrapins that include the *bijuku* or juvenile Malaysian giant turtles (Chew, 2010; Furtado & Mori, 1982; Giesen, 1998; Hails, 1996)

*Figure 2*  Lotus, water lilies, screw pine and pandanus at Lake Bera
Lake Bera is surrounded by secondary lowland forests. This type of forest derived originally from the primary dipterocarp forest, which was severely reduced to secondary lowland forests due to development programmes involving agriculture, logging, land clearance and urbanisation. Lowland dipterocarp forests are rich in flora and support a rich variety of birds including partridges, pheasants, hornbills, babblers, a wide variety of resident and migratory thrushes, warblers and fly-catchers (Jeyarajasingam & Pearson, 1999, p. 18). Some of the birds found near Lake Bera are the jungle fowl including the Crested fireback pheasant, Lophura ignita; and the endangered Malayan peacock pheasant, Polyplectron malacense. Birds observed in the villages and forests are the White-throated kingfisher, Stork-billed kingfisher, Collared kingfisher, Long-tailed tailorbird, Scaly-crowned babbler and Greater racquet drongo. Other birds include bulbuls, tailorbirds, parakeets, parrots, sparrows, drongos, parakeets, egrets (Jeyarajasingam & Pearson, 1999; Madoc, 1985).

These forests are also home to many types of animals, insects, amphibians and reptiles. A diverse range of flora and fauna can be found here. The flora includes an interesting species of trees and plants including the meranti, keruing, tualang tree. Interesting types of faunas include the Malayan Sunbear (beruang), Malayan tapir (cipan), Malayan Pangolin (tenggiling), Clouded leopard (harimau dahan), Asian elephant (gajah), Small-clawed otter (memerang), Common gibbon (ungka tangan putih), Pig-tailed macaque (beruk), Siamang, Wrinkled hornbill (enggang berkedut), Asiatic soft-shelled turtle (labi) and Broad-backed terrapin (yok rungak).

In November 1994, Malaysia signed an agreement under the United Nations Convention of Wetlands designating Lake Bera as a Ramsar site (Wetlands of International Importance). This agreement meant that Malaysia is responsible and obliged to protect, preserve, sustain, manage and promote wise use of the resources designated under this site. Lake Bera covers an area of 61,380 ha; while the Ramsar site is 31,120 ha including 6,900 ha of wetland habitat (The Sun, Oct 23, 2003). This designation catapulted projects to fulfill the requirements of the agreement.

Semelai culture

The Semelai have a system of authority that maintains traditional and customary laws in their society. These include the approval and witnessing of marriages, adherence to tribal taboos and customs, social issues that include land rights, inheritance, minor disputes, adultery, incest or theft. Semelai communities are placed under the control of a ketua, or headman who is in turn governed by a higher authority that is the batin (Hoe, 2001, p. 13). The worldview of the Semelai people formed their social customs and beliefs which in turn regulates their social life. Beliefs in the supernatural world, the existence of the spirits of living things, ghosts, and origin myths shape the worldview of the Semelai community. Beliefs in spirits that control and manipulate their world form the basis of their taboos. This belief system also encourages adherence to laws to prevent interference with harmony in nature. These animistic beliefs lead to beliefs in healing through the intercession of spirits. Sickness and disease call for the assistance of a poyang, a community shaman, who possesses the power to interact with the spirits of the other world. Healing ceremonies known as bebelian go through a series of intercessions with a set of spirits before the diagnosis of the sickness. Interactions with the spirits are achieved through chants and songs related to each particular spirit (Hood, 1978).

Semelai customs also include adherence to a series of taboos that are related to prohibitions associated with food, planting paddy; facing the Tok Mudin (circumciser), Tok Batin (village head) or Tok Poyang (medicine man/ shaman); hunting, fishing, entering the jungle; pregnancy and childbirth and many others. Traditional customary practices, which validate the
Semelai people’s existence in this world, are carried out through the rites and rituals of birth, head-shaving, ear-piercing, circumcision, wedding ceremonies, funerals and burial rituals. Festivals and celebrations are held to mark the New Year, the bountiful harvest and the fruit season. There is the harvest festival (Hari Menyulung), tampoi or fruit season, Berderau, Berselang and Menuba celebrations. Festivals are a time of celebrations and thanksgiving for the abundance of crops, the good harvest, plentiful of resources and other community events. The season for these events depends on the agricultural cycle of the crops and fruits planted by the Semelai community. During festive occasions, men and women sing, dance and drink together at the balai, a small thatched hut made of wood and bamboo, to the accompaniment of a rebana and gong. Men celebrate by drinking air tuak, a drink consisting of fermented fruits and juice from a fruit called tampoi (Santharamohana, 2003).

**RELATIONSHIP BETWEEN MUSIC AND IT’S BIOPHONY**

The music of traditional communities are often inspired by the sounds from their surroundings. The villages of the Semelai communities are surrounded by a unique natural environment that includes a peat swamp ecosystem of freshwater and lowland forests habitats. This ecosystem is home to diverse endemic flora and fauna in Malaysia. Their musical instruments are also made from the flora and fauna from this natural environment. The Semelai musicians mimic and recreate the biophony of their natural surroundings by plucking, strumming, bowing and striking of their acoustic music instruments. However, there has been little research that relates the biophony of the environment of Malaysia with the people residing in these spaces.

In traditional societies, music is an important medium for connecting humans with the spirits of animals and nature in the non-human world. The Aborigines and Torres Straits people of Australia mimic the movement and sounds of animals including the kangaroo, brolga or rabbit. Through correct performance, the Aborigines believe they are able to tap into the ancient and creative power left by them (Miller & Shahriari, 2006, p. 68). The throat singing of the Tuva in Siberia, known as khoomei are human mimicry of nature’s sounds. The Tuva believe that there a spiritual energy that is sonically manifested from the natural environment such as the mountains, water, animals. In imitating the sounds of these elements, they are able to assimilate power with these elements for specific purposes (Miller & Shahriari, 2006, p. 217). The Kaluli society in Papua New Guinea have a system of modes and codes of sound communication that connects their natural environment with their social structure (Feld, 1990).

This article presents an analysis of the music created by the Semelai musicians from listening and mimicking the biophony of the natural environment. I argue that these musicians are not merely imitating but are creatively reimagining the sounds from their environment. The music is rendered from their musical instruments and resonates from the verandah of Semelai bamboo thatched huts during the late evenings. This instrumental music adds an additional texture to the colourful polyphonic musical texture already inherent in Lake Bera.

**The Semelai Music Instruments and Instrumental Music**

The music instruments of the Semelai people are the keranting (three-stringed plucked bamboo tube zither), the rebab (two-stringed bowed lute), gambang (wooden xylophone), ginggaung (bamboo Jew’s harp), rebana (framed drum), saluung (end blown flute) and bronze gong (Chan, 2005, p.26). The musical instruments of the Semelai are made from the resources available in the lowland forests and lake surrounding their village. These resources are bamboo; wood from the meranti and terap tree; the shells of coconuts; string from tree roots or fishing rod; skin from the ikan buntal (giant puffer fish) or monkey (Chan, 2005).
This next section describes the organology of Semelai musical instruments and techniques of playing them. It also consists of the musical description and analysis of the instrumental music of the Semelai. The instrumental pieces are titled as “songs” because they are depicting the “songs or music from the animals”. The relationship between the music and its source of inspiration is also presented based on interviews with Semelai musicians. I will also relate how the melodic and rhythmic motives are produced with its source of inspiration.

The music played by the Semelai musicians has been transcribed into western music notation for analysis. The western system of music notation is used as a parameter for gauging the approximate pitches played by these music instruments. The western music notation system is chosen due to the familiarity and common understanding among musicians of the world about these notations. In the case, where the pitches are only approximate, symbols, such as, a plus or addition sign (+) are indicated on the notation. Analysis of the transcriptions reveals melodic motifs or patterns, rhythmic motives, frequency of pitches, central pitches, sequences, form and structure the music piece. It must be noted that the transcriptions made of the music are only basic melodic and rhythmic patterns; and structure of the music. Sometimes these basic patterns are varied through slight rhythmic or melodic embellishment. These improvisations depend largely on the technical skills, the creativity are the musical aesthetics of each individual Semelai musician.

The rebab

The Semelai rebab (Figure 3) is a two-stringed bowed lute. The body of the rebab is made from a coconut shell. The skin of a giant puffer fish, tetrodon palembangensis is stretched across the open half of the coconut shell (Chan, 2005, pp. 29-33). The coconut shell functions as a resonator for the rebab. It measures 11 cm in diameter and 13 cm in height. The fingerboard or neck of the rebab is made from meranti wood and extends 38 cm upward from the top of the shell. Two strings are attached to lateral tuning pegs at top of the neck. The strings are stretched across the neck and run over a bridge on the body of the rebab. Both strings are tied to a small piece of wood at the bottom of the shell and held up by a bridge called the tongkat. The two strings are nylon strings or guitar strings and both are of the same thickness. The bow used to bow the rebab is similar to the violin bow. However, instead of using hair from the tail of a horse, the late Pak Babu uses fishing rod strings tali tangsi for the bow. This material produces a silvery, crispy and hoarse sound when bowed against the strings of the rebab (Chan, 2005, pp. 30-33)
Technique of Playing: **Rebab**

The *rebab* is placed upright in front of a performer who is seated on the ground with his legs folded in (Figure 3). Sound is produced when the player draws the bow across the strings just slightly above the bridge.

**The Tuning of the Rebab**

The strings of the *rebab* are tuned approximately a major third apart. The two strings, from left to right (top view) is tuned to an approximate G sharp and C diatonic pitch (Figure 4).

![Major 3rd](image)

*Figure 4*  The tuning of the *rebab*
Music from the Rebab


‘The Song of Cherantil Bird’ *Lagu Cherantil*. Based on the late Pak Babu’s description (personal communication, 6 May 2005), we believe that the bird known as the “Cherantil” could be the Malayan Peacock-Pheasant, *Polyplectron Malacense*, an endemic bird from Lake Bera. It is about 40-53 cm (16-21 in). It possesses a prominent blue green crest and bare orange facial skin. The male pheasant is dark buff brown with tinges of green ocelli on it wings, back and tail. The female resembles the male, however, it has a shorter tail and duller colour. Its ocelli is also smaller and black in colour. The Malayan Peacock-Pheasant is a resident from low elevations to 300m, south to Negeri Sembilan. Its natural habitat is the forest and they are usually found in pairs or alone. This bird is shy but very vocal. The male bird utters a disyllabic sound, the first note brief and the second note ascending. This bird also makes loud, explosive cackles that diminish into a long series of clucking notes (Jeyarajasingam & Pearson, 1999).

These pheasants can usually be seen around 5 pm. They are a loud, noisy and boisterous clucking lot. Their noisy cackling is interspersed with moments of tuneful, melodious clucking. This is how the late Pak Babu describes this bird:

... serupa ayam tapi dia laua bunga-bunga pada rambutnya ... ekor serupa ayam punya ekor ... tapi dia muncung pun serupa ayam ... takkan lain macam burung pekakanya lain ... dia eari makan kira dalam tanahlah dia, bukan macam lain burung dia terbang pun nampak kemudian tangkap ... ahh makan serangga dalam kira tanah ke, kayu-kayu buruk, kayu tanah ...sana dekat saya punya kebun bawah sana, ada kadang-kadang dekat seberang tasik dia bunyi .. itu, itu ayam liar ... warna dia dulu macam serupa ayam dekat mahu kuning sikit la, dia punya rambut, bunga-bunga, laua bunga dia ... Dek toa toa dek toa toa dek dek dek dek ... Lelaki kira perempuan, perempuan kira lelaki dia bunyi dua dua sekali, jawab-jawab ... rebab bunyi dekat macam dia ...’ (The late Pak Babu, personal communication, 6 May 2005).

Translation:

... similar to the chicken, but it has beautiful flowers (feathers) in its hair (body and head) ... its tail is like the chicken's tail, its beak is also similar ... unlike the kingfisher which is different, it forages for food in from the ground, unlike others that pounce on their prey from the air ... ahh eats insects from the ground, among the rotted wood ... it can be seen near my vegetable garden down there and sometimes it makes much noise opposite the lake ... the colour of the bird is like the chicken but more yellow ... its feathers are very beautiful ... *Dek toa toa dek toa toa dek toa toa dek toa toa* ... male and female, female and male, both cluck noisily, calling and answering among each other ... the rebab sounds like that too ...’ Below is a transcription of the verbal musical recreation of the sound of the Malayan Peacock-Pheasant by Pak Babu. (The late Pak Babu, personal communication, 6 May 2005).

\[
\begin{align*}
J &= 120 \\
\end{align*}
\]

*Figure 5* Verbal mimicry of the sounds of the Cherantil bird (Source: The late Pak Babu, 6 May 2005)
Figure 6  The “Song of the Cherantil Bird”

Figure 7  Rebab: Motif a

Figure 8  Rebab: Motif b

Figure 9  Rebab: Motif c (ostinato drone)
The song of the Cherantil bird recreates the tuneful singing of the Malayan Peacock-Pheasant through a series of trills and turns on three pitches- middle C, C# and D in bar 1 and 2 (Figure 6). These trills and turn represents tuneful singing and validates what Pak Babu says about the bird whose ‘noisy clucking is interspersed with melodius tunes’. The verbal sound ‘dede dekdek dekdek…’ on quaver beats beginning on the eight beat (Figure 5) could well represent the description ‘diminishes into a long series of clucking notes’ as mentioned in Jeyarajasingam and Pearson’s book. The first bar of melodious singing ends on a higher pitch, or C# in bar 1. The second bar of tuneful singing ends on a lower pitch, or G# in bar 2. Analysis of this song shows two conspicuous melodic motifs, motif a (bar 1) and motif b (bar 2). The first melodic motif ends on a higher pitch while the second melodic motif ends on a relatively lower pitch. The rhythmic motive for a and b is the same.

The “melodious” tune is repeated before it enters into an ostinato drone alternating on two pitches, middle C and G# below middle C (bar 5-7, 13-15). A cyclic feel is created as the two pitches move back and forth in a repetitious cycle. There appears to be a magnetic pull toward the lower G pitch. The sound produced by this ostinato drone is an imitative recreation of the first six crochets verbally sung by Pak Babu (see Figure 5). The grouping into compound time results in the cyclic feel similar to the music played on the rebab. The melodic motif of this song is made out of this structure ababcdb ababcdb. In general the form is AAAA.

**The Keranting**

The *keranting* is a three-stringed bamboo tube zither (Figure 10). It measures 60 cm in length and 4.5 cm in diameter. The bamboo used to make the *keranting* is called buluh telur (*buluh*: bamboo; *telur*: egg). The first string from the left of the *keranting* (topview) is the longest string and attached to the top of the *keranting* by encircling and knotting it securely. The second and third strings are also attached similarly but they are knotted lower than each other. There are three frets along the shortest string. The three strings are threaded through a piece of ‘ringlike’ accessory made of bamboo, placed at the upper end of the *keranting*. The design of the ‘ringlike’ accessory is called *gigi yok*, literally meaning a ‘child’s teeth’ in the Semelai language. The strings are threaded through the *gigi yok*, stretched across the *keranting* and attached to the holes at the bottom. The strings are made of metal wire or guitar strings and can be tuned by pulling the knotted end of the string upward to tighten it or pushing it downwards to loosen it. Sometimes the string from fisherman’s rod or *tali tangsi* is used. However, the sound produced would be much lighter and softer than those using the guitar strings (Chan, 2005).
The late Pak Babu plucking the keranting

**The Tuning of the Keranting**

The lowest string of the keranting is placed on the left of the keranting (top view). It is also the longest string. The first and second string is tuned an interval of a major 2\textsuperscript{nd}. The second and third string is approximately a major 3\textsuperscript{rd} apart. The length of the first string from the left to the right is as follows: cm. The strings are tune to (from the lowest to highest) to G, A (both below middle C) and C# (Figure 10)

![Diagram of string tuning]

**Figure 11** The tuning of the keranting
**Technique of Playing**

The *keranting* is held diagonally across the player who sits with his legs folded in. The end of the *keranting* should touch the ground at an angle of 45 degrees. The ground acts as a resonator for the *keranting*. The volume is slightly higher when it is held in this position. The player plucks the *keranting* with his right hand. The lowest string is plucked with the thumb. The thumb is placed next to the first string on the *keranting* when it is not plucked. The first index finger is used to pluck the second and third string (Figure 10). Sometimes it strums both or all the strings together. The strumming of the second and third strings creates an interval of a major third, thus producing a rich, consonant sound. The melodic line is played on the third fretted string.

**Instrumental Tunes on the Keranting**


“The Song of the Shorebird” *Lagu Burung Laut*. The Song of the Shorebird is about the Pacific reef-egret, *Egretta sacra* found in Lake Bera. In Bahasa Malaysia, it is called *bangau batu*. There are two colours to this bird, black and white; referred to as dark morph and pale morph. They have the same characteristic although they are different in colour. The Pacific reef-egret is 58 cm (23 in) in length. It has grey facial skin and greenish legs. The dark morph egret has a dark slaty plumage and a narrow white mark on its throat that is hardly visible. Its bill is rather blackish having tinges of yellow on its mandible. The Pacific reef-egret makes low croak sounds when it is foraging and sounds a short harsh ‘arrk .’ when alarmed. These birds are coastal and offshore residents and are usually seen near rocky shores, coral reefs and mudflats. Their distribution ranges from the coasts and islands of China, Japan, and Korea through South-East Asia to Australia and the western Pacific (Jeyarajasingam & Pearson, 1999, p. 89). The Pacific Reef-Egret is usually seen alone or in pairs. Their habitat preference is the coastal areas, though some may be sighted alone flooded rice fields inland. They are also seen foraging for fish near the shoreline. Pacific reef egrets also like to rest on one leg on rocks (Jeyarajasingam & Pearson, 1999, p. 89)

*Ini macam hitam ini, kecil, serupa bangau ... ia datang masa air berair kira besar, air dalam padang rumput-rumput tumbuh ...* (the late Pak Babu, personal communication 6 May, 2005)

Translation:
It is black, small, same like an egret ... it comes when the water is considered big (high) ... water in between a field of plants (probably referring to tube sedges) (the late Pak Babu, personal communication 6 May, 2005)
The “Song of the Shorebird” played on the *keranting* brings about a certain faraway nostalgic feeling. The image of birds flying high and low near the shore comes to mind when this song is played. Pak Babu says; “*main tiga kali halus, tiga kali kasar*”. This is literally translated as “play it three times finely and three time roughly”. What the late Pak Babu refers to as ‘fine’ is actually the higher pitches and ‘rough’, is the lower pitches. This movement from high to low and low to high may refer to the flight of the shorebirds. Therefore, a soaring and descending movement is felt when this piece is played. The alternation between low and high pitches as seen in Figure 12. The first melodic motif, motif a ends in a higher D pitch. Motif a is repeated in bar 2 and 3. At bar 4, the melodic motif, motif b ends on a lower A pitch, instead of a D as before. Motif b is repeated in bar 5 and 6. The rest of the song is improvised, varied and embellished based on an alternation between lower falling and higher rising pitches. The form of this piece is: *aaa bbb aaa bbb* or *ABABAB*.
The *Gambang*

The Semelai *gambang* is a wooden xylophone consisting of five tuned slabs of wood suspended onto a wooden trough. It produces a soft, delicate and ringing sound. The *gambang* is made from the wood of the *telinga gajah* or *terap*, *Artocarpus elasticus* tree. This tree is found in the lowland forests surrounding Lake Bera. The *gambang* consists of five tuned slabs of wood suspended on top of a wooden trough measuring approximately 57cm in length, 32.5 cm in width and 14.5cm in height. The trough is rectangular, hollow in the centre and functions as a resonator for the instrument. The slabs of wood rest on top of a string stretched horizontally across the two parallel length of the trough. These strings are wound over six cylindrical pieces of wood protruding vertically along the parallel edges of the wooden trough.

**The Tuning of the Gambang**

The five slabs of wood on the *gambang* are not arranged in a series of low to high pitches or long to short slabs of wood. The shortest slab of wood is place in the centre. The length of these slabs of wood gets longer in contrary motion to the center piece. The pitches of the *gambang* are not tuned based on the standard western system of tuning. However, I will use the western tempered measurement as a benchmark for gauging the pitches on the *gambang*. The measurements of the slabs of wood on the *gambang* is stated in Table 1.

**Table 1. Gambang scale and measurements**

<table>
<thead>
<tr>
<th>Pitch number (from left)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key (approx. pitch)</td>
<td>D#</td>
<td>G</td>
<td>B</td>
<td>F#</td>
<td>Cx</td>
</tr>
<tr>
<td>Length</td>
<td>50</td>
<td>42</td>
<td>40</td>
<td>43</td>
<td>49.5</td>
</tr>
<tr>
<td>Width</td>
<td>7</td>
<td>6.5</td>
<td>7</td>
<td>6.5</td>
<td>7</td>
</tr>
<tr>
<td>Height</td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
</tr>
</tbody>
</table>

The keys of the *gambang* are tuned to a five-toned (pentatonic) scale with unequal intervallic structure (Table 1). The first slab of wood on furthest left of the main player is D#. The D# is slightly higher than the note found in the standard western tuning system. The successions of pitches that follow are G+, B, F# and Cx. The plus/ addition symbols indicate that these notes are slightly sharper compared to those in the standard western tuning. The highest pitch and shortest slab of wood is B that is placed in the centre. This follows by the second highest in pitch, placed to the left of B, which is a G sharp. This third highest pitch is F#, placed on the right of B. This is followed by Cx on the furthest right hand and D# the left furthest left end. The *gambang* is played by two players sitting opposite each other. The main player plays a melodic line while the other accompanies the player with an ostinato drone.

**Music from the Gambang.** The *gambang* is played by two people simultaneously, one person plays the main melody and the other plays an ostinato pattern in accompaniment to the melodic line. When the pitches of the ostinato pattern coincide, the harmony produced is consonant in sound. The coinciding of these pitches falls generally on the first and third pitch, or the first and sixth pitches. In Western harmony concepts, these combinations of pitches provide a rich and full consonant sound. The *gambang* is a relatively unique instrument among the Orang Asli in the Peninsula. The other group of Orang Asli that plays a wooden xylophone is the ‘Temuan’. They
call it the ‘kongkong’, however, it is played using the method of placing two pieces of wood on top of the thigh and striking the wood.

Figure 15 The “Song of the Dekdoi Bird”

Figure 16 Gambang: Motif a
The Dekdoi Bird

The Dekdoi Bird may be the Semelai name for the Scaly-crowned Babbler (Burung Rimba tua kecil). The Semelai call these birds “dekdoi” because they make the sound *dek doi dek doi* ... ...
“Song of the Dekdoi Bird” *Burung Rimba Tua Kecil.* The Scaly-crowned Babbler, *Malacopteron cinereum* bird is 17 cm (6.5 in) in length. It possesses a rufous crown, a black head and nape, whitish underparts and a brownish grey breast. Its beak and feet are pinkish in colour. The scientific name for this bird is *Malacopteron Cinereum.* This bird can be found in Indo-China through Thailand and Peninsular Malaysia to the Greater Sunda Islands. Its natural habitat are forests in lowland elevations and hills up to 790 m (Jeyarajasingam & Pearson, 1999, p. 330). This bird is sighted in groups hoping around in between the leaves and branches of low trees searching for insects. (G.W.H Davidson, Karen Phillips & Alias Kamis, 1989, p.72). The Scaly-crowned Babbler produces a series of up to six wheezy high-pitched whistles on an ascending scale. Bird calls usually consists of three to four whistles with the middle or second note at its lowest. While foraging for food, it can produce three-four clear whistles with the middle or second note being the lowest (Jeyarajasingam & Pearson, 1999, p.330).

According to Pak Babu (personal communication, 6 May 2005), the dekdoi bird's call is an alteration of high and low pitch verbally imitated as *dek doi dek doi dek doi dek doi dek doi ....* This repetitious alteration of pitches is sounded by the ostinato part in the song of the Dekdoi bird on the *gambang.* The form of this piece is ‘aababa acbab acbab acbab acbab’ or ACCBAB.

**Ginggong**

The Semelai *ginggong* is a jew's harp made from bamboo. The jew's harp is a common instrument among the Orang Asli of peninsula Malaysia. There are two types of jew's harp, played by the Semai: the *ginggong* is made from metal while the *rangot* is made from bamboo.'

**Technique of playing**

The Semelai *ginggong* is about 16.0 cm in length and 1.0 cm in width. A strip of bamboo known as the tongue or the lamella is cut out in the center of the *ginggong.* The tongue is flexible and vibrates when movement is generated. The *ginggong* is placed between the lips and sound is produced when the *ginggong* is tugged with an attached string. The jerking movement set in motion by pulling the *ginggong* causes the lamella to vibrate. This vibration is amplified by the mouth, which functions as a resonator for the *ginggong.* Pitch changes occur when the player changes the size of his or her mouth cavity.
Music from the Ginggong

The ginggong is a Jew’s harp made from bamboo and tugged with a string attached to one end of the ginggong. Tugging the bamboo causes the “tongue” of the ginggong to vibrate, generating sound when placed against a mouth resonator. At one time many Semelai men and women could be seen playing a ginggong during hours of leisure time during the day. During my fieldwork, I was only able to locate one elderly lady named Makcik Tete from Kampung Jelawat who still played the ginggong. Even then, she did not have a good ginggong and there was hardly anyone in the vicinity who could make a good ginggong.

The ginggong songs that Makcik Tete could still remember were “Eating Grated Tapioca Song”, Cha Ubi Kot Kot (cha: eat; ubi: tapioca/ cassava; Kot-kot: grated); “The Song of the Flamboyant Kingfisher” Lagu Pekaka Tonjol and “Eating Raw Mouse Song” Cha Kanek Jak-jok (cha: eat; kanek: mouse; jak-jok: raw) (Chan, 2005, pp. 69-77).

“Eating Grated Tapioca Song”, Makan Ubi yang Diperut, Cha Ubi Kot Kot. The dietary staples of the Semelai people are tapioca, cassava and yam. These plants are usually found in their vegetable gardens. The song, “Cha Ubi Kot-kot” (Figure 21) means to eat all types of...
tapioca which has been grated and mixed together. The melodic motif consists of two bars whereby a higher and lower pitch plays in alternation. While this song is played, the player makes a sound that resembles kot-kot on the notes shown bar 2 (Figure 22). Below is a transcription of the melody line of some songs. The musician recites text while pulling the string. Besides the melody, there is a bass sound coming from the throat of the musician while he or she is playing.

Figure 21  “Eating Grated Tapioca Song” Cha Ubi Kot-kot Makan Ubi yang Diparut

Figure 22 Gambang: Motif Melodic

**Conclusion**

The music of the Semelai embodies the biophony of Lake Bera, and is indiengous to Peninsular Malaysia. It is a unique portrayal of the native flora and fauna inherent in the peninsula. Unlike the musical traditions of Malays, Chinese and Indian Malaysians that were inherited from ancestors who migrated to the Malay Peninsula, the music of the Semelai tells the story of the natural, original geographical landscape and ecosystem of Lake Bera. They are creative imaginings of Semelai musicians on the natural ecosystem in a peat swamp forest and freshwater lake environment. These musical creations add another layer to the polyphonic texture of the original biophony of the village surroundings. It is important for the Malaysian government to recognise and sustain the beauty and aesthetics of Semelai music as this musical tradition represents a connection between the people and the natural environment of Peninsular Malaysia. It embodies the creative ideas and improvisation skills of indigneous musicians in Malaysia.
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References


