

PHILIPPINE BAMBOO INSTRUMENTS

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Abstract

Bamboo abounds in the Philippines and boasts of several hundred species. They are used in many ways, principally as a timber substitute in building abodes. Some species are used for fishing poles, digging, or plant props. They serve as water pipes as well as water carriers. Their outer barks, when peeled off, are woven into mats or sheets (*sawali*) used as walls and dividers in homes, or for baskets. Their shoots are used for food and some bamboos provide medicine. Their abundance accounts for the variety of music-making devices that have been fashioned out of it. Some of the instruments are blown; others are plucked or even struck. Thus, we have aerophones, chordophones, and idiophones.

Keywords: *organology, playing techniques, music-culture area mapping of music instruments, music ensemble practice, comparison of music instruments*

AEROPHONES

Instruments that produce sound when blown are called aerophones. Sound is produced in these instruments by the vibration of the air within. Aerophones are further subdivided into groups depending on how the vibration is generated. Thus, there are flutes, reeds, cupped mouthpiece instruments, and free aerophones.

Bamboo flutes are widespread in the Philippines. They are mostly end-blown wherein the air stream is directed against the sharp rim of the open upper end of the tube by the player's lips. There are, however, variations in the shape of the blow hole.

Nose flute. The nose flute is widespread in northern Philippines. It is made of a length of **buho** bamboo of about half a meter

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with a node on one end. The other end is open. The closed node end of the bamboo tube has a small blowing hole bored in the center of the node. The player closes one nostril and forces air through the other into the small hole. The nose flute has four stops—three finger holes on the dorsal side and one thumb hole on the ventral side. The thumb hole is bored at approximately the middle of the tube. The mid-point is determined by balancing the tube on the finger—the center being the point where the flute stays balanced. The next three holes on the dorsal side are bored equidistantly from each other—the unit of measurement being the width of the three middle fingers laid side by side. The resultant flute stops produce a gapped anhemitonic (no semi-tone) scale with the gaps occurring between pitches one and two and four and five of the five tone pitch series.

Music for the nose flute is improvised using formulaic patterns in descending motion. The rhythm is non-metric with phrases ending on long held tones on the fundamental or an octave above. The music produced is soft but carries clearly especially on quiet evenings. Played mostly by men, the nose flute is used for serenading or for quiet moments of relaxation. Among the northern Kalinga, the nose flute may be used for funerals.

The different groups of people in the north use different names for the nose flute: **Tongale, tongali, tungali, enonggol, inongngol, inungngol, innung-ngor** (Kalinga); **bali-ing**, (Isneg); **kaleleng, kalaleng, kurareng** (Bontok, Kankanaï); and **unggiung, unngiyung** (Ifugao).

Nose flutes have been found, though sporadically, in the south among the Hanunuo (**lantoy**), Batak (**lantoy**), Cuyunin (**lantoy**), Bukidnon (**bulaktob/yangyang**), and Tagabili (**beberak**). The Cuyunin nose flute is gigantic in comparison to the other nose flutes, with tubes much larger in diameter. It has two stops bored beside each other in the lower half of the tube.

Lip-valley Flute. The distinctive feature of this bamboo flute is an open mouth-piece which is curved at a slant to follow the contour of the performer's lower lip, hence the name "lip-valley" flute. The average bore of the instrument is about 2 cm. and its length may be more or less than a meter. At the opposite end of the tube, a notch is carved, marking the end of the instrument

proper; the portion of cane beyond this point only serves to make the instrument look longer. Four holes are bored in the instrument—one on the central side to suit the position of the thumb facing up towards the side of the instrument, and the remaining three holes are bored on the opposite side of the tube to match the position of the fingers on the dorsal side of the tube. The thumb hole on the central side is bored at approximately the middle of the tube. The three playing holes on the dorsal side are bored at distances measured in reference to the circumference of the cane near the mouth piece. Thus, the first finger hole on the dorsal side is measured one-circumference length (called **likus** by the Bukidnon) away from the middle hole, the second hole is measured two-circumference lengths away from the first hole, and the third is one-circumference length away from the second finger hole. This method of boring holes was documented among the Mandaya (**bunabon**), Atamatisalog (**polundag**); and Bukidnon (**pulala**). This type of boring produces a gapped scale.

This type of flute is found all over the Philippines although those found in the south are generally longer. In northern Philippines, the lip-valley flute is known by different names: **abalao**, **abellao**, **sinongyop** (Bontok); **balding**, **paldong**, **enoppok**, **innupok** (Kalingga); **tipano**, **kipano**, **paldeng** (Isneg); and **taladi** (Ibaloi).

The melodies played on the lip-valley flute are mostly improvisatory. When given titles, the titles describe what the music is trying to simulate such as the chirping of a bird, the cry of an eagle, the buzz of a wasp, etc. It is an instrument of leisure used for serenades, courting, or merely to pass the time away.

Fipple Flute. In the fipple (plug) or whistle flute, sound is generated by directing the player's breath through a fixed channel and against a rigid sharp edge. The fipple is the wooden plug which stops the end of the tube except for the narrow channel or flue or windway. Generally these flutes have the usual three plus one stops, though some have a two plus one structure. It is not as common as the other types of flute. The instrument produces high, shrill tones which young boys are partial to. It is known as **olimong**, **ullimong** (Kalingga); **kallaleng** (Balangaw); **teptepew** (Bontok), **ongiyong**, **tappang** (Ifugao) and **pitu** (Tagalog).

Ring Flute. **Suling**, which is a generic term for flute in most

Indonesian languages, is applied to the ring flute by the Bilaan, Mangguagan (Manobo), and Tiruray, as well as by the Muslim Jamamapun, Maguindanao, Sama, Tausug, and Yakan. It is also called by other names: **dagoyong** (Higa-onon); **g'lantoy** (Subanun), **falandag, pulundag** (Bilaan, Ata); **kinsi, kungsi** (Bukidnon); **lantey, lantoy, lantuy** (Ata); **poluytoy, saguysuy** (Manobo Agusan); **seleli, s'loli** (Tagabili, T'boli); **thulali** (Subanun); **tiwali** (Manguagan); and **tompoy, tumpuy** (Bukidnon).

This vertical bamboo flute has a ring surrounding the blowing end of the tube, thus its name. It is a variety of the end blown flute supplied with a duct or fipple. The duct is in the outside wall of the tube under a ring-like sleeve. The player's air stream is directed against the sharp edge of the hole cut in the pipe just below the mouthpiece.

The Subanun **g'lantoy** of Sindingan, Zamboanga del Norte has three finger holes—one on the underside and two on the opposite side. The Bukidnon **kungsi** has four finger holes, all on the same side. The Ata-Matigsalog **lantoy** has four finger holes—one on the underside and three on the opposite side.

These flutes are played by either sex mainly for entertainment. The melodies express different sentiments—love, grief, joy—or imitate sounds of birds and insects. The flute is often used to lull a baby to sleep.

Other flutes. Aside from the ring-type and lip-valley flutes, there exists another type which has an external duct with a covering chip glued on the tube. Found among the Subanun, this flute is called **thumping**. A v-shaped duct is cut on the edge of the mouthpiece and this is covered by a piece of wood and glued onto the duct with hardened wax from the house bee. The thumping has five or six holes, all situated on the frontal side of the tube. Played mostly by women for self entertainment, the thumping or tompong is heard in the early morning or early evenings. Sometimes it is played while keeping watch over the rice fields. The tompong is occasionally played in ensemble with a kotapi, kombing, and kutet.

Stopped pipes ensemble. The Kalingga use a set of bamboo pipes of graduated length (the longest about 25 cm) called **Saggeypo**, open on top and closed at the bottom by a node. The open end

which has a slight concave curve is held against the lower lip as the player blows directly across the top. The pipes can be played individually by one person or in ensembles consisting of three or more. The rhythms played in the ensemble imitate those of the Kalingga gong ensemble. The saggeypo is used primarily for entertainment by youth and adults alike, and is often played while walking along mountain trails. One player may use two pipes at a time, blowing each tube alternately. When played as an ensemble by a group, the pipes are blown alternately, one by each player, to produce different pitches which vary with the length of the tube. A similar instrument among the Bontok is called **sagay-op** or **sapsap-ok**.

Panpipes. Open pipes that are tied together are called panpipes. Rarely used today are the bamboo panpipes called **dad-ayu** (Balangaw—eight tubes), **diwas** (Kalingga—the term sometimes referring also to the saggeypo); **diwdiwas** (Bontok—five tubes); and **diwas** (Kankanai—five tubes). A Tingguian **dewdew-as**, in the Chicago Field Museum of Natural History, has seven tubes.

Transverse Flutes. Most Philippine transverse flutes are adaptations or imitations of European versions as evident even in the borrowed names: **flauta** (Ilonggo, Sebuano, Bicol); **palawta** (**Hanunoo, Waray**); **plawta** (Manobo, Cotabato). The Cuyunin use a transverse flute called **tipanu** which is also found among the Batak of Palawan.

Reed Pipes. In the reed pipes, the column of air is activated by vibrations of a single or double reed in the mouthpiece. Reeds are made out of a thin piece of cane, metal, or even leaves. Reed pipes are uncommon in the Philippines.

In the north, the Ifugao use a **hupip** or **hupeep** made from a thin piece of bamboo (about 1 cm. in diameter and 23 cm. in length) with three equidistant finger holes. The reed is formed by cutting and raising a tongue from the bamboo tube.

IDIOPHONES

Idiophones are instruments with no definite pitch whose sounds are produced from the substance of the instrument itself. They are further classified according to how the sound is produced (i.e., by striking, plucking, blowing, or rubbing).

Stamping Tubes. The Kalingga **tongatong** is made of a bamboo tube, closed by a node in the bottom portion and open on top. A set of six (or seven) tongatong of varying lengths (ca. 25 cm. to 50 cm.) and diameters (ca. 6 cm. to 10 cm.) makes up an ensemble with one player to a tube. The tongatong is held by one hand and pounded at a slight angle on the hard earth or floor. The other hand of the player is used to partly cover and uncover the open end of the tube to produce variations in sound. Slight variations in pitch can also be made by opening and closing a small thumb hole bored at the lower portion of the tube. Rhythms played by the ensemble imitate rhythms played on the **gangsa toppaya**. The first four performers execute identical rhythmic patterns in canon to each other. In counterpoint to this, the fifth performer plays a rhythmic drone against which the sixth performer weaves another, more varied and freer pattern. The tongatong is played by young boys and girls for entertainment and relaxation. The same instruments serve a different purpose during rituals, **dawak**, for curing the sick or driving away evil spirits. The tubes are sounded to accompany the medium as she dances around the sick person.

Quill Shaped tubes. A smaller type of bamboo percussion are the quill shaped tubes. These are made of bamboo tubes, smaller in diameter (ca. 3.5 cm.) than the tongatong. They are closed in one end with a node. In the upper portion of the tube, about half of the bamboo is cut away leaving the remaining half to protrude like a tongue. At the lower end of the instrument, a hole is bored which is covered and uncovered by the thumb of the player's hand holding the instrument thereby producing a variation in pitch. The instrument is struck against a hard object—a stone, a stick, or another tube. The instrument is referred to by the Kalingga as **dongadong**, **patang-uk**, **patang-ug**, **taggitaq**. The Isneg call it **patunggu**. The Kalingga play this instrument while walking on the mountainsides on their way to a peace pact or celebration. It is supposed to prevent evil spirits from spoiling the celebration. It is also played in curing rituals for serious illnesses. When played in ensembles of six (as in the case of the tongatong), the rhythms of the gangsa (gongs) are simulated.

Xylophone Blades. These are bamboo xylophone-like blades cut from a **buho** tube. The bamboo blade is tapered on both ends. It is laid on the player's thighs as he sits on the floor with legs outstretched. Thus it is sometimes referred to as the leg xylophone.

The blade is struck by two thin bamboo sticks held on each hand. It is called **patatag/patteteg** by the Kalingga and **talonggating** by the Isneg. Children learn the rhythmic patterns of the gongs (gangsá) when taught to play these instruments.

Buzzers. Bamboo buzzers are prevalent in northern Luzon where they are called **avakkao** (Bontok); **balingbing, ubbeng** (Kalingga); **pewpew** (Ifugao); **bilbil, bungkaka, pahinghing, patuaw** (Isneg, Tingguian); and **pakkung** (Ibaloi). These buzzers are fashioned from a length of buho bamboo (about 45 cm. or more long and about 3.5 cm. in diameter) with a node at the bottom. In the top half of the instrument, two tongues facing each other are shaped by cutting off the sides of the bamboo pipe. A slit divides the tube in half thereby allowing the tongues to vibrate when the instrument is struck against the lower portion of the palm of the hand. The buzzing sound can be altered by covering and uncovering the small hole bored in the bottom half of the instrument with the thumb of the player's hand which grasps the pipe.

The Cordillera highlanders use this instrument primarily for entertainment. They are played as solo instruments or in ensembles. The Kalingga use a set of six buzzers in graduated sizes, imitating the rhythms sounded on the gangsá. When played in forest trails, the music is said to drive away evil spirits lurking there. The Ibaloi **pakkung** is played as a solo instrument.

Bamboo Xylophone. The bamboo xylophone is found in southern Philippines among the Yakan (**agung gabbang**); Samal (**gambang**); Tausug, Palawan (**gabbang**). It consists of bamboo keys of graduated length set atop a trapezoidal box. The number of keys varies among the different groups (Yakan—3 to 9, 5 most common); Tausug (14-22, 17 most common); and Palawan (17). The keys are struck with two mallets, each with a strip of rubber fastened to its underside.

Clapper. The Ifugao have a clapper made from a tubular section of bamboo (ca. 25 cm. long) cut from node to node. The tube is split from one end to about half the length of the instrument. Each half of the split portion is shaped to become narrower in the middle, thus making it more flexible when the halves are made to flap against each other. The instrument has several names depending on its use: **hanger, sangar, sangal, palipak, haklik, ta-ita**. When used in a ritual ceremony, the **hangar** is played only by the **mumba-i** (priest).

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The priest beats the hangar against the body of the sacrificial pig, smearing its blood on the instrument.

Jaw Harp/Jew's Harp. The Jaw harps/Jew's harps are found all over the Philippines. These are principally made from bamboo although in northern Philippines some are made of metal. It is a type of mouth-resonated instrument consisting of a flexible tongue fixed at one end to a surrounding frame. They range in length from 10 cm. to 30 cm. The player places the free end of the tongue in front of his open mouth and sets the tongue in vibration by flicking one end of the instrument with the hand or in some types, by pulling a string attached to the blade. By various movements of the tongue and larynx, different sounds or even simulations of words and phrases can be produced.

In Mindanao, the jaw harp is made of bamboo. Some are plain and others have more ornate designs dye-painted on the handles with accompanying bamboo containers. **Kubing** is the most common term used among the Ata, Bagobo, Bilaan, Bukidnon, Maguindanaon, Manobo, Mansaka, Maranao, Tagakaolo, Tausug, T'boli, Tiruray and Subanun.

In Luzon, variations of the term **olibaw/ulibaw** (Kalingga) are used for the bamboo jaw harp. Some of these terms are **aribaw** (Isneg), **barimbao** (Tagalog), **kulibaw/ kuribaw** (Ayta, Dumagat, Isneg), **pulibaw** (Ilonggot), and **subing** (Abyan).

Slit Drum. The bamboo slit drum is fashioned out of a bamboo tube, ca. 10 cm. in diameter and half a meter long, closed at both ends with a node. A slit about 2 cm. wide is cut out of the side of the tube. The instrument is played by striking with a bamboo or wooden stick. It is called **bantula** (Bukidnon), **buntala** (Higa-onon), **kagu** (Manobo Agusan), **koratong** (Mansaka), and **kuratong** (Higa-onon). Among the Bukidnon, the bantula was used by the datu to announce the onset of war or to announce a forthcoming meeting of datus. The Mansaka hang the koratong by a window or door or sometimes on a frame outside the house. They strike it to summon neighbors. Its sound can be heard up to two or more kilometers away.

CHORDOPHONES

Chordophones are stringed instruments that may be plucked, struck, or bowed.

Zithers. These are instruments with strings that run parallel to the length of its body which acts as the resonator. Philippine zithers have resonating bodies that are made from bamboo tubes or half tubes or wooden boards. Tube zithers are found in northern Luzon, Mindanao, and Palawan. They are of two types: polychordal zithers with several strings that run around the tube, and parallel stringed zithers which usually have two strings on one side of the tube.

Polychordal Tube Zithers. These are widespread in the Philippines. They are found in the Cordilleras and in the Mindanao and Palawan area. The instrument is made from a bamboo tube (approximately 10 cm. in diameter and averaging half a meter long) closed on both ends by nodes, which however are partially opened for more resonance. Strings are etched out of the bamboo body itself and remain attached at both ends. To give the string more tension, small wooden frets are inserted beneath the strings near the ends. The number of strings vary from five to eight or nine and, occasionally, even eleven.

In the Cordilleras, polychordal zithers are known by different names: **kolitong, kuletong, kulitong** (Bontok, Kalingga); **kollesing, kulesin, kulising** (Ilonggot); **killeteng, kulitteng, ohitang, uritang (Isneg);** and **kulibet** (Kalingga). The Kalingga kulibet has six or sometimes eleven strings. In the six-stringed kulibet, two strings on the frontal side are plucked by the thumbs of both hands and four strings on the dorsal side are plucked by the middle and index fingers. The player holds the instrument with both hands and plucks. One end of the instrument is made to rest against his lower waist. A continuous melody is formed by the use of alternate fingers of both hands. The Isneg **ohitang** has five strings, two in front and three in the back. The **kollesing** of the Ilonggot has five or six strings. The instrument is held by a man, while the woman strikes the strings with small bamboo sticks.

In the south, terms used for the polychordal zither are **salorai, saluray, saluroy, saw-ray** (Manobo, Ata); **sigitan** (Subanun); **sloray, senday, sluray, s'ludoy** (Bilaan, Tagakaolo, Tagabili, T'boli); **takul** ((Mansaka); **tangkew** (Agusan Manobo); **tangke** (Tirurai); **tangko, tangku** (Mangguagan, Diba-bawon); **togo** (Manobo, Tirurai, Maguindanao); and **pagang** (Palawan).

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Five-stringed zithers are found among the Subanun. The sigitan player, plucking the strings, may be joined by another performer who taps a drone on the body of the instrument with two bamboo sticks. The sigitan may be used to accompany a dance or simply to express human sentiments of love, sorrow, sadness, or joy.

The eight stringed **tangke** of the Tirurai is played by two women. Using a plectrum, one plucks a drone while the other plucks a melody.

The Bilaan, Ata Matigsalog, and T'boli polychordal zithers are played in combination with the two-stringed lute. Among the Bilaan, women play the sluray for self-entertainment. It is also used as a courting instrument. Played in ensemble with two lutes, it is used to accompany dancing especially during festive occasions, such as weddings. The Bagobo **tugo** has seven strings whereas the Bukidnon Matigsalog **saluray** has six strings. The Bukidnon Matigsalog perform a courting dance, with the female playing the saluray and the male playing his **kudlong** (lute) while singing. They dance around in small steps, the male following the female.

Parallel-Stringed Tube Zithers. These tube zithers are made from a heavy bamboo tube about 40 cm. long closed at both ends with a node. Two bamboo strands about 5 cm. apart are etched out of the body of the tube. Acting as strings, small wooden bridges are inserted beneath them at both ends. At midpoint of the tube below the strings, a small hole is bored. The hole is covered by a small bamboo plate clipped to the strings. When played, the strings are struck by a bamboo stick or plucked (Batak).

The instrument, with slight variations, is found in northern Luzon (Isneg **bambam**, **pasing**; Kalingga **tambi**); in Zambales (Ayta Magkunana **tabenbbeng**); in Mindoro (Hanunuo, **kudlong**); in Mindanao (Manobo, **katimbok**, **tabobo**;; Subanun, **tabobok**, **thambabok**; Bukidnon, **takumbo**); and in Palawan (Batak, **patigunggung**). The Subanun instrument has an opening on the upper node which the player covers and uncovers while performing. The Subanun play the thambabok mainly for self-entertainment and relaxation.

Parallel-Stringed Half-Tube Zither. The bamboo half-tube zither found among the Ifugao is called **tadcheng**, **tedcheng**, **gacheng**,

or **ayudding**. It has two to four strings which, depending on the style of playing, are plucked with the fingers or struck with small bamboo sticks. Boys and men play the *tadcheng* for entertainment, often tapping rhythms patterned after those played on the gongs.

Violins. The Kalingga **biyulin** or **gologod**, and the Isneg **onabir/nabir** are examples of European-type violins. The Isneg *onabir* is made from one section of bamboo closed at both ends with nodes. Its three strings are made of steel or pineapple fiber; the bow is made of bamboo and abaca fiber. The Isneg play the *onabir* for relaxation, extemporizing on the instrument in imitation of vocal forms such as the **oggayam** and **disodi**.

Others. In more recent times, bamboo instrumental ensembles have cropped up. These ensembles play Westernized harmonic music. The **musikong bumbong** is a bamboo band that uses improvised instruments. Then, there is the **pangkat kawayan**, another type of ensemble using bamboo instruments. One must also mention the famous bamboo organ of Las Piñas, built in the first quarter of the 19th century and restored in the 1970's.

SUMMARY

The abundance of bamboo accounts for the many varieties of instruments made from it—idiophones, aerophones, and chordophones. The bamboo music tradition is much older than the gong tradition although today these instruments are not given the same prestige as gongs. It is difficult to determine what kind of music was played on these instruments before the coming of the gongs.

Today, bamboo idiophones—tubes, buzzers, clappers—are similar to gong music. These idiophones do not have definite pitches. As in gong music, what is more significant is tonal qualities, timbres and colors of sounds produced. Thus, the Kalingga bamboo tubes, *tongatong*, when used in sets of six, play rhythms identical to the *gansa toppaya* ensemble. The same *toppaya* rhythms are played on the *patang-uk*, quill shaped tubes, as well as on the *balingbing*, buzzers. Children learn gong patterns on the leg xylophone, *patatag*, using two sticks to simulate the *toppaya* style or one stick to imitate

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the patpong style. However, the music played on these instruments are not necessarily confined to gong rhythms only. Thus, the Kalingga tongatong are played during curing rituals for the sick. The Isneg tungtung is played as a solo instrument. For entertainment and during moments of relaxation, the Kalingga balingbing is played solo.

Flutes share a common construction feature that is, a hole bored in the middle of the tube. Subsequent holes are bored in relation to this middle hole. Most flutes have a mid-bore plus three additional holes, while others have four additional holes. Both kinds produce gapped scales. Flutes with the 3 plus 1 stops produce scales without semitones while those with the 4 plus 1 stops produce scales with semitones. A preliminary study made by Maceda (1990) reveals separate musical repertoires and aesthetic applications for these tunings—“feelings of emotion for half steps and a representation of nature and the physical tangible world for whole steps.”

Instrumental music of the Philippine highlanders is part of their day to day activities. It is heard in fields during planting and harvesting, at home for self-entertainment and relaxation, on festive (birth, marriage) and solemn (death) life cycle occasions, and at curing or thanksgiving rituals. The transmission of playing technique and styles which has been handed down through generations goes on, adapting itself to the ever-changing environment and thereby continuing to grow and transform. The old traditional music played on these instruments has managed to survive despite the heavy influx of alien influences bolstered by the proliferation of electronic gadgets—radio, television, cassettes. Undoubtedly, these have caused some changes but the music continues to grow and develop as it has for centuries. The direction it takes will depend on how deeply the indigenous communities value and cherish their traditions. Hopefully, bamboo music will continue to evolve as a distinctly Filipino and Asian form of expression.

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Corazon C. Dioquino finished Bachelor of Music (magna cum laude, 1952), Master of Music (1953), and Doctor of Philosophy in Music (1955) from Catholic University of America. Thereafter, for a little less than five decades, she taught at the College of Music, University of the Philippines Diliman core music subjects such as Western art music history, music analysis, bibliography, and musicological research methods. She had supervised many research students during her long teaching career at the UP College of Music, where she also held various administrative positions. In cooperation with Dr. José Maceda, Dr. Dioquino catalogued the field recordings of traditional Philippine music, music instruments, and other materials now archived in the UP Center for Ethnomusicology. She had contributed articles in the Cultural Center of the Philippines Encyclopedia of Philippines Arts (volume 6 on music), *Acta Musicologica*, and in the Garland Encyclopedia of World Music (volume on Southeast Asia).