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PURPOSE--To elevate the level of music percussion performance and teaching; to expand understanding of the needs and responsibilities of the percussion student, teacher, and performer; and to promote a greater communication between all areas of the percussion arts.

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In this issue

The Case for Matched Grip Today By John "Tony" Ruka	73
The Use and Innovations of Percussion in the Works of J. S. Bach and Handel By Gene J. Pollart	75
"That" Small Ensemble Conducting Controversy By Ronald W. Holdman	81
Bass Drum By Robert Matson	85
Acoustics of Timpani: Preliminary Studies By Thomas D. Rossing and Garry Kvistad	90
An ORFF Approach to Teaching Indonesian Gamelan Music By William A. Anderson	98
Time and Place	106

1. W.S. Rayleigh, *The Theory of Sound*, Vol. I, Macmillan, 1894 (reprinted by Dover, 1945).
 2. H.W. Taylor, *The Art and Science of the Timpani*, Baker (London) 1964.
 3. P.W. Morse, *Vibration and Sound*, McGraw-Hill, 1936.
 4. A.H. Benade, private communication. This is also discussed in his recent book, *Fundamentals of Musical Acoustics*, Oxford, 1976.

Chladni patterns, first described by E.F.F. Chladni in 1787, are a standard method for observing the vibrational patterns of plates and membranes. Coarse particles, such as salt or sand sprinkled on a vibrating membrane, collect along nodal lines, whereas fine particles, such as cork dust or lycopodium powder, behave oppositely, tending to migrate to areas of maximum vibration. Chladni patterns are described in the following articles: Proc. Roy. Soc. A211, 265 (1952); Am. J. Phys. 23, 503 (1955); *Acustica* 29 14 (1973); also in M.D. Waller, *Chladni Figures, A Study in Symmetry*, Bell and Sons (London), 1961 and in T.B. Lindsay, *Acoustics, Historical and Philosophical Development*, Dowden, Hutchinson and Ross, 1973, p. 155.

5. H. Fletcher and I.G. Bassett "Analysis and Synthesis of Bass Drum Tones," 90th Meeting of Acoust. Soc. Am., San Francisco, Nov. 7, 1975.

6. James Blades, *Percussion Instruments and Their History*, Praeger, 1970.

7. P.R. Kirby, *The Kettledrums*, Oxford, 1930.

8. R. Culver, and T.D. Rossing, "The Acoustics of Chimes," 90th meeting of the Acoust. Soc. of America, San Francisco, Nov. 7, 1975; also T.D. Rossing, "The Acoustics of Percussion Instruments: *The Instrumentalist* 30, No. 10, 55 (May, 1976).

9. R.S. Brindle, *Contemporary Percussion*, Oxford Univ. Press, 1970, p. 142.

10. T.D. Rossing, "Resource Letter MA-1: Musical Acoustics," Am. J. Phys. 43, 944 (1975).

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AN ORFF APPROACH TO TEACHING INDONESIAN GAMELAN MUSIC

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Indonesians have cultivated a rich tradition of vocal and instrumental music, including solo, chamber, and orchestral styles. One of the most sophisticated types of music is that played by ensembles of instruments known as gamelan. Gamelan are composed primarily of metallophones and knobbed gongs positioned either horizontally or vertically. In addition, most ensembles possess a flute, several stringed instruments, and drums. Solo voices and a unison chorus are also integral members of the ensemble.

For many centuries performances by gamelan have been an important part of Indonesian life. Gamelan accompany puppet plays, dance dramas, weddings, birthdays, festivals, visits of guests and heads of states, and numerous other occasions. Gamelan are found not only in the more wealthy urban areas but also in every small village. Attesting to the overwhelming popularity of the ensemble, in the 1930's Jaap Kunst, a Dutch ethnomusicologist, found over 17,000 gamelan on just the islands of Java and Madura (small island off the coast of Java).

Some of the gamelan found in urban areas contain very high quality bronze instruments, which are positioned in embroidered in-laid gold teakwood frame supports. Performances by these ensembles are often heard on radio throughout the islands. Village gamelan generally have fewer instruments than ensembles found in urban areas. The instruments in rural ensembles also are somewhat less refined, sometimes being made of iron or bamboo. Although more sophisticated concerts generally are heard in urban areas, village performers often seem to overcome lesser ability with greater enthusiasm. Gamelan is an important communal activity with clubs rehearsing regularly to prepare for yearly competitions held among various groups.

Teaching Gamelan Music

Gamelan are found in a number of areas in the United States: University of California, Los Angeles, University of Michigan, Wesleyan University, University of Washington, Oberlin College, and the Indonesian Embassy in Washington, D.C. For teachers living near these areas, arrangements can often be made for having students see and play real instruments. However, since gamelan instruments are hand-crafted and expensive, instruments can be used which are already available in schools and which are nearly similar in sight and sound to those of real Indonesian orchestras. For example, a makeshift gamelan can be organized with Orff glockenspiels, metallophones, and xylophones, along with resonator bells, and several gongs (see Figure 1).



Figure 1 — Javanese Gamelan

Javanese Instruments

Classroom Instruments

Saron Barung	Alto Glockenspiel
Saron Demung	Alto Glockenspiel
Slentum	Alto or Bass Metallophone
Gong Ageng	Large Vertically Suspended Gong
Kenong	Three Gongs Suspended Horizontally On Pasteboard-Box Frames
Kempul	Three Vertically Suspended Gongs
Ketuk	One Gong Suspended Horizontally On a Pasteboard-Box Frame
Peking	Soprano Glockenspiel
Gender	Alto or Soprano Glockenspiel
Bonang	Resonator Bells with Construction- Paper Discs
Gambang Kayu	Xylophone
Kendang	Barrel-Shaped Conga Drum

Several styles of gamelan playing are found in Indonesia and the one described here is the Javanese tradition. Javanese gamelan music is constructed in the following manner: First, there is a principal melody which is repeated over and over in equal time values throughout a composition. The principal melody for a composition called **Ritjik-Ritjik** ("Flowing Water") appears below (Figure 2) in Western notation along with a cipher notation used by the Javanese.

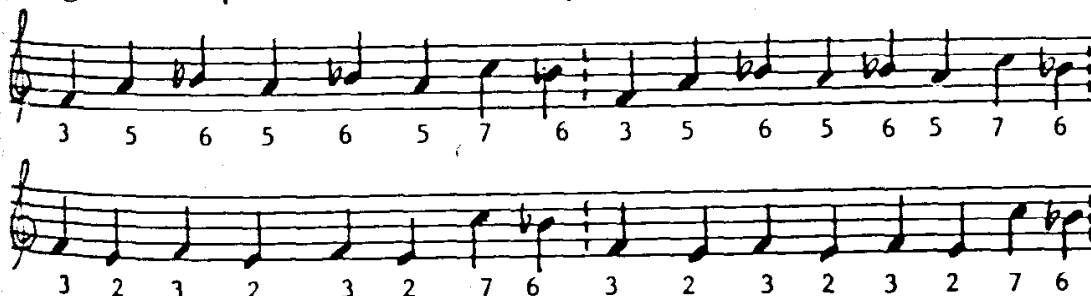


Figure 2.—Principal Melody for Ritjik-Ritjik

The principal melody is a fundamental element of gamelan music, acting a foundation for the development of other melodic and rhythmic parts. The melody is generally played by three instruments, the saron barung, the saron demung, and the slentum (see Figure 1). The saron barung and saron demung are barred instruments with thick rectangular-shaped bronze keys. The instruments are built in octaves so that the pitches of the saron demung are one octave lower than those of the saron barung. In addition to the saron barung and saron demung, another instrument, known as the slentum, often reinforces the principal melody at an octave below the saron demung. Although somewhat similar to the saron, the slentum has thin bronze plates carefully supported by cords over resonating tubes.

All three instruments are played with rounded wooden mallets. However, the mallet for the slentum is covered with a cloth cushion.

In fashioning a makeshift ensemble, the saron barung, saron demung, and slentum can be represented in the classroom by two single-row Orff alto glockenspiels and an alto or bass metallophone.

The single-row keyboards are similar to the real gamelan instruments and also have the advantage of permitting the player to execute a key damping technique employed by Indonesian musicians (See below).

The second element in gamelan music is the rhythmic framework created by a series of gongs (see Figure 1) which are sounded at various points of the principal melody. The longest phrase units of an orchestral composition are marked by the sounding of the gong ageng, the largest gong in the gamelan. The gong ageng is approximately a yard in diameter and when its protruding boss is struck with a cloth-covered mallet, the instrument elicits a very low voluminous "boom." A large orchestral gong may serve as the gong ageng in a school ensemble. In the composition **Ritjik-Ritjik**, the gong ageng is played on each eighth beat (see Figure 3).

Figure 3.—Principal Melody and Interpunctory Gongs

Beats	1 &	2 &	3 &	4 &	5 &	6 &	7 &	8 &			
Principal Melody	3	5	6	5	6	5	7	6			
	3	5	6	5	6	5	7	6			
	3	2	3	2	3	2	7	6			
	3	2	3	2	3	2	7	6			
Interpunctory Gongs	T	N	T	P	T	N	T	P	T	N	G

G = Gong Ageng (beat 8)

P = Kempul (beats 3, 5, 7)

N = Kenong (beats 2, 4, 6, 8)

T = Ketuk (off-beats)

Each phrase unit delineated by the sound of the gong ageng is subdivided into four sections by sounds of the kenong, a set of gong kettles positioned horizontally on cords stretched across wooden frames. In **Ritjik-Ritjik**, for example, the kenong are played on beats 2, 4, 6, and 8.

Kenong may be constructed for the classroom by placing several small gongs of different size on cords stretched between the sides of pasteboard-box frames. In **Ritjik-Ritjik**, the kenong sound on pitches 5, 6, and 2 of the principal melody. The pitches of the kenong should match as closely as possible those of the principal melody on which they are played.

The phrase divisions marked off by the gong ageng and the kenong are further subdivided by the kempul, vertically suspended gongs, and by the ketuk, an instrument consisting of two horizontal gongs placed on a frame with cross cords. The kempul may be fashioned from ver-

tically suspended gongs available from several music dealers in the United States. As with the kenong, the pitches of the kempul match the pitches of the melody on which they are played. In the composition **Ritjik-Ritjik**, the kempul sound on beats 3, 5, and 7 while the ketuk is played between beats.

So far it has been shown how instruments function to produce two fundamental elements in gamelan music, namely the principal melody and the interpunctory gong parts. Attention is now directed to the third and final group of instruments in the gamelan—the embellishing instruments. The embellishing instruments elaborate on the principal melody in a variety of ways. Stated generally, there are several types of elaboration, some of which are relatively simple and others which are highly complex. The intricate techniques performed on some instruments may require many years to develop.

Some simple embellishing techniques may be played on a number of different instruments. These techniques will be described below along with a few of the elaborating instruments of the gamelan which can be substituted by instruments already in the classroom.

One of the most common simple embellishing techniques is that of reiterating each tone of the principal melody (Figure 4).

Figure 4.—Embellishment Through Reiteration of Each Pitch in the Principal Melody.

Beats	1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 &
Principal Melody	3 5 6 5 6 5 7 6
Embellishing Instrument	3 3 5 5 6 6 5 5 6 6 5 5 7 7 6 6

A more advanced version of the above technique is often performed. This technique consists of not only doubling but also anticipating each of the notes of the fundamental melody (Figure 5).

Figure 5.—Embellishment Through Doubling and Anticipating the Principal Melody.

Beats	& 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8
Principal Melody	3 5 6 5 6 5 7 6
Embellishing Instrument	3 3 5 5 6 6 5 5 6 6 5 5 7 7 6 6

In a makeshift gamelan for schools, the simple embellishing techniques explained in Figures 4 and 5 may be executed by the following instruments: peking, gender, bonang, and gambang kayu (see Figure 1).

The peking is a small xylophone-like instrument with thick bronze keys. It may be substituted by a small soprano glockenspiel. The gender are metallophones which have thin bronze plates suspended by cords over resonating tubes. The voluminous quality of the gender may be duplicated in the classroom by an alto or soprano Orff metallophone. The bonang consist of a number of small gong kettles which are placed on cords stretched between sections of a horizontal frame. Bonang may be fashioned for schools by covering resonator bells with yellow construction-paper discs. The gambang kayu, which is a wooden xylophone in the gamelan, can be easily substituted in the classroom by an Orff xylophone. While the gambang often doubles or doubles and anticipates the melody, it may also use an embellishing technique known as quadrupling (see Figure 6).

Figure 6.—Embellishing Technique of Quadrupling.

Principal Melody	3	5	6	5	6	5	7	6
								etc.
Gambang Kayu	3333	5555	6666	5555	6666	5555	7777	6666

It must be remembered that the embellishing techniques shown above represent only a few of a great number of elaborating procedures, many of which are highly complex. Further it should be noted that in the gamelan there are five other members of the embellishing family which are not discussed above. These include the suling (flute), the rebab (bowed lute), the tjelempung and siter (plucked string instruments), and vocalists. These instruments and voices provide some of the most highly independent melodies in the gamelan.

Added to the foregoing instruments is a set of drums which help coordinate all parts of the gamelan. The drummer is the functional leader of the ensemble and has the responsibility for maintaining tempo, indicating changes in speed and dynamics, directing transitions from one section to another, and for successfully ending compositions.

Performing Gamelan Music

In learning to perform the gamelan composition **Ritjik-Ritjik**, the principal melody (performed on the saron barung, saron demung, and slentum) should be placed on the blackboard in the Javanese number notation (see Figure 2). The melody is to be repeated over and over in a steady rhythm of equal time values (♩ -88). Since all elements of gamelan music are related to the principal melody, students should be encouraged to sing along (with numbers) and to memorize the tune. Those students who are playing the instruments should attempt a damping technique employed by the Javanese. (In moving from one

pitch to the next on Javanese instruments, it is necessary to dampen each pitch with the left-hand thumb and index finger as each succeeding key is struck. This technique is essential in preventing the blurring quality created by overlapping pitches).

In order to assist in playing the principal melody on the saron barung, saron demung, and slentum, numbers corresponding to the cipher notation of the gamelan composition should be affixed to keys of the makeshift instruments with small plastic gummed labels. The labels should be placed on the lower part of the keys where they can easily be seen and yet far enough from the end of each key so as not to interfere with the key-damping technique.

While learning the principal melody, the interpunctory gongs can be added to the ensemble. As shown in Figure 3, in **Ritjik-Ritjik**, the gong ageng is sounded on beat 8, the kenong on beats 2, 4, 6, & 8, the kempul on beats 3, 5, and 7, and the ketuk on the off-beat.

Once the students are able to play the melody and interpunctory gongs together in a steady tempo, another gamelan technique may be added—that of loud and soft sections. In gamelan compositions, there are two styles of playing: a loud style in moderately fast tempo and a soft style executed at a somewhat slower pace. In the soft/slow sections, the tempo is approximately half that of the loud/fast sections. Further, in the slow sections, all instruments in the gamelan play softer except those which are embellishing the melody. The embellishing instruments should predominate in the soft sections.

The composition **Ritjik-Ritjik** should be rehearsed by playing the principal melody through six times, two times in loud/fast style, two times in soft/slow style, and finally two times in loud/fast style (see Figure 7). The teacher or a student should help the group make changes in tempo by using the conga drum.

Figure 7.—Rehearse Ritjik-Ritjik with Loud and Soft Playing Styles

Loud/Fast	Soft/Slow	Loud/Fast
3 5 6 5 6 5 7 6	3 5 6 5 6 5 7 6	3 5 6 5 6 5 7 6
3 5 6 5 6 5 7 6	3 5 6 5 6 5 7 6	3 5 6 5 6 5 7 6
3 2 3 2 3 2 7 6	3 2 3 2 3 2 7 6	3 2 3 2 3 2 7 6
3 2 3 2 3 2 7 6:II	3 2 3 2 3 2 7 6:II	3 2 3 2 3 2 7 6:II

Once the students are able to execute the principal melody and the interpunctory parts in loud- and soft-playing styles, the embellishing

parts may be added. As mentioned earlier, these parts are to be played on four types of instruments: the peking, the gender, the bonang, and the gambang. Students may begin the embellishing parts by doubling each note of the principal melody (see Figure 4). After they are able to perform this technique with ease, the somewhat more advanced manner of anticipating while doubling may be employed (see Figure 5). When playing in soft/slow sections, the gambang player may employ a further technique—that of quadrupling the melody (Figure 6).

In order to assimilate the embellishing procedures, it is suggested that the techniques be employed gradually, making sure the students are secure with each one before adding the next. The complete composition should be rehearsed a number of times with the form given in Figure 7: twice through the principal melody in loud/fast style, twice in soft/slow style, and then twice again in loud/fast style. Considerable attention will be necessary in making a smooth change from one section to another.

As soon as the students are playing the composition with some degree of ease, a short introduction may be added. The introduction is to be played by one instrument, often a bonang. The introduction to **Ritjik-Ritjik** is given below (Figure 8) and is to be played in a tempo which is twice as fast as that of the principal melody in the composition.

Figure 8.—Introduction to Ritjik-Ritjik.

6 . 3 5 6 . 5 3 2 . 3 5 6* *gong ageng sounds

As will be observed, the gong ageng signals the end of the introduction. The composition proper follows the introduction without a break. However, as mentioned, the composition is at a tempo approximately half as fast as the introduction.

In summary, I have attempted to show how the gamelan music of Indonesia can be presented in schools with instruments now available in the United States. Performance with Orff instruments provides a means of having students actively involved in learning how a music outside their own Western system is structured.

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