

rest on it, uninterrupted, right to the end. Focusing in on a musical process makes possible a shift of attention away from the *he* and *she* and *you* and *me*, outward toward *it*.<sup>2</sup>

NYMAN: What is your particular interest in African drumming?

REICH: I became interested in African music through A. M. Jones's book, and I recently found a group at Columbia University with a Ghanaian drummer from the tribe Jones had written about. One of my reasons for going to Ghana and studying drumming is, in the very simplest sense, to increase my musical abilities. I studied rudimentary Western drumming when I was 14 and interested in jazz, and this last piece, *Phase Patterns*, is literally drumming on the keyboard: Your left hand stays in one position and your right hand stays in one position and you alternate them in what's called a paradiddle pattern, which produces a very interesting musical texture because it sets up melodic things you could never arrive at if you just followed your melodic prejudices and your musical background.

NYMAN: You're not interested in taking over the sound of the music and incorporating it into your music?

REICH: What I don't want to do is to go and buy a bunch of exotic-looking drums and set up an Afrikanische Musik in New York City. In fact what I think is going to happen more and more is that composers will study non-Western music seriously so that it will have a natural and organic influence on their music.

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## GAHU—A DANCE OF THE EWE TRIBE IN GHANA (1971) 7

Written in 1971; "Gahu, A Dance of the Ewe tribe in Ghana"—*Source Magazine*, no. 10, edited by Alvin Lucier, Composer/Performer Edition, Davis, California, Fall 1972. During the second visit to London (1971), Reich also met A. M. Jones and showed him the transcriptions that appear in this essay.

During the summer of 1970, I went to Ghana to study drumming. With the help of a travel grant from the Special Projects division of the Institute of International Education, I traveled to Accra, the capital of Ghana, where I studied with a master drummer of the Ewe tribe who was in residence with the Ghana Dance Ensemble, the national dance company that rehearses daily in the Institute of African Studies at the University of Ghana.

2. Reich is here virtually quoting from his own 1968 essay "Music as a Gradual Process" (no. 2b); see p. 36.

I took daily lessons with Gideon Alorworye and recorded each lesson. Afterward I would return to my room, and, by playing and replaying the tape, sometimes at half or one-quarter speed, I was able to transcribe the bell, rattle, and drum patterns I had learned. The basis for learning each individual instrument was as follows: First I would learn the basic double bell (gong-gong) pattern, which is the unchanging timeline of the whole drumming. Then I would learn the rattle (axatse) pattern, which is quite similar to the gong-gong pattern and also continues without change throughout the entire performance. We would then proceed to the drums by my playing the gong-gong while my teacher played one of the drum patterns. We then exchanged instruments and I would try and play the drum pattern while he played the bell. I found that while I could pick up the drum patterns fairly rapidly by rote, I would forget them almost as rapidly. I couldn't really remember them until I could understand exactly what was going on rhythmically between the drum and the bell patterns. This process of understanding was greatly aided and accelerated by replaying the tapes of my lessons until I could finally write down with certainty the relationship between any given drum and the bell pattern. One drum after the other was learned and written down in relation to the bell until an entire ensemble was notated. This method was followed as the result of reading A. M. Jones's *Studies in African Music* (Oxford University Press, 1959). Dr. Jones has been able to make the first full scores of African music (as it happens, of the Ewe tribe) by using his own drum recorder, which consists of a moving roll of paper that is electrically marked each time a drummer touches one of his metal pencils to a metal plate. As Dr. Jones tapped out the bell pattern, an Ewe master drummer would tap out one of the drum parts, and both patterns would be recorded in accurate graph form on the moving paper. This was then transferred to conventional notation. My readings in Dr. Jones's book in 1963 first awoke my interest in African music, and that interest grew through listening to recordings, corresponding with Dr. Jones, and finally having two brief lessons with Alfred Ladzopko, another Ewe master drummer in New York who was working with Nicholas England at Columbia University. Finally, I decided it was important to go to Africa myself and learn some drumming by drumming.

Gahu is an extremely popular dance. It can be performed whenever and wherever the musicians and dancers feel like it. This is in contrast to the court dances Atsi-*agbeko* of the Ewes and *Fontenfrom* of the Ashantis, both of which are only performed at the proper formal time and place. All Ghanaian dances are appropriate to particular situations, and Gahu is appropriate to a relaxed informal one.

Gahu is not a purely Ewe dance. My teacher told me that it originally came from the town of Gbadagri (ba-da-gree), which used to be situated in Nigeria between Lagos and the Dahomey border. The Ewes used to go on fishing trips with these people who were called Agunnas or Guans, and had their own language that was neither Yoruba nor Ewe. My teacher did not say how long ago this had been.

In Ghana, the name of a piece of music is also the name of the dance that is

performed to that music. The two are inseparable. (I once attended an informal recording session outdoors in back of the Institute of African Studies where several musicians were playing directly in front of two microphones. Although they all were quite aware that only sound was being recorded, several people, nevertheless, started dancing the appropriate dance.) Gahu is a circle dance performed by men and woman. The basic step is simply alternating the feet in small steps forward (left, left, right, right) while swinging the arms gently to the opposite side of the body (right, right, left, left) all on the basic four quarter-notes of the bell pattern. There are many other variations I am not familiar with.

Often in the afternoon, preceding the evening's drumming, the Ewes perform Hatsyiatsya songs, which are sung to the accompaniment of four iron bells; two gong-gongs and two atokes. This accompaniment is a miniature polyrhythmic drumming made of beautiful bell sounds. I became extremely fond of these sounds and asked Gideon to teach me the Hatsyiatsya patterns for Gahu (see ex. 7-1).

This represents a very approximate notation of the pitch of these bells. The high E $\flat$  in the first atoke is actually a bit sharp, while the high C in the second atoke is a bit flat. The E $\flat$  on the first gong-gong is very flat, and, depending on where you strike the bell, is sometimes a sort of minor second with D and E $\flat$  combined. The second gong-gong is about a quarter-tone above the A in the notation. The absolute pitch of these kind of bells varies a good deal, although gong-gongs are usually roughly tuned to octaves or major sixths.

The basic pattern is played by the first atoke who, together with the second atoke, never changes his pattern throughout the piece. The second atoke is free to add two sixteenth-notes in place of his single eighth-note on any or all beats. The two gong-gongs each have a first pattern only two quarter-notes long, so that two of their patterns equals one atoke pattern. Both of them begin their patterns in different places, and neither of them begins on the first beat of the atoke pattern. This, in simplified miniature, is the essence of African rhythmic structure: several repeating patterns of the same or related lengths and each with its own separate downbeat. Pattern two for the gong-gongs is a simple alternation of double sixteenth-notes on their lower bells, which acts as a sort of changing pattern leading to their third pattern, which, for the first gong-gong, begins on the last eighth-note of the atoke pattern, while the second gong-gong begins on the third quarter-note of the atokes. There is no hard and fast rule as to when the gong-gongs will change from one pattern to the next, but they must do so together. Players are also free to reverse the order of high and low bells within a particular pattern. Since players are seated, the rests in the gong-gong patterns are created by bringing the large bell directly down on the thigh on each rest, thereby muting it. The atokes are muted on rests by touching the edge of the bell with the thumb of the hand holding it. My teacher mentioned that there were many other patterns, and also said that up to eight gong-gongs could play with the two atokes.

I have not transcribed the songs because, basically, I was not really attracted to them. The accompaniment was what I found to be unique, beautiful, and quite

The image shows a musical score for "Hatsyiatsya bell patterns" in two systems. Each system contains four staves:

- ATOKE 1:** Features a melodic line with a key signature of one flat (B-flat) and a common time signature. The notes are primarily eighth and sixteenth notes.
- ATOKE 2:** Features a similar melodic line to ATOKE 1, with some notes marked with a '7' and the word "also" below them.
- GONG-GONG 1:** Features a rhythmic pattern of eighth notes. A circled number '1' is placed below the first measure.
- GONG-GONG 2:** Features a rhythmic pattern of eighth notes. A circled number '2' is placed below the eighth measure.

The second system continues the patterns for ATOKE 1, ATOKE 2, GONG-GONG 1, and GONG-GONG 2. A circled number '3' is placed below the first measure of the GONG-GONG 1 staff in this system.

Example 7-1. *Hatsyiatsya* bell patterns.

different from anything in Western music. Since I am a composer/performer and not a musicologist, I am passing along the information that I believe may be of particular interest to others in situations like my own. Those wishing to see other Hatsyiatsya songs transcribed more completely with accompaniment and melody are urged to look at A. M. Jones's *Studies in African Music*.

The instruments used in the full drumming of Gahu are: one or two gong-gongs, at least one rattle, although it is common for several people to double the easy rattle part in any Ghanaian drumming, and the following drums: kagan, the smallest; kidi, the second smallest; sogo, the next to the largest; and agboba, the master drum (see ex. 7-2). Those familiar with Ewe music should note that for Gahu, which as mentioned earlier, is a dance the Ewes imported from Nigeria, a special drum, agboba, is used in place of the customary Ewe master drum, atsimevu.

Unfortunately, because of illness, I was unable to stay in Ghana and complete the preceding transcription, so that only the basic repeating bell and rattle parts, together with the beginning pattern in the master drum with the appropriate response patterns in the supporting drums, appear here. The pitch of the drums, which is important although it varies a bit from performance to performance, is also not notated for lack of time. Those interested in the pitch of Ewe drums are again referred to Jones's work. With all these limitations this is, nevertheless, the first and at present the only transcription of both the Hatsyiatsya patterns and the basic drumming of Gahu.

The basic pattern of the whole dance appears in the gong-gong. It is exactly what the first atoke was playing in the Hatsyiatsya patterns. The first time the pattern is played, the performer may remind all the other musicians of his down-beat by playing it on his low bell. Thereafter, unless someone loses his place in relation to the bell pattern, the gong-gong player just "rides" his top bell only, ringing out over the whole ensemble. This  $\frac{4}{4}$  pattern is a bit unusual for Ewe or West African music in general, where one most often finds the basic bell pattern to be in what we would call  $\frac{12}{8}$ , as in the transcription of Agbadza that follows. When I finally decided that this pattern had to be written as it appears on page 60, I wrote to A. M. Jones to ask for his reaction to what I considered to be an unusual pattern. He responded that it was, in fact, quite similar to the basic gong-gong pattern in the Ewe dance Sovu and was, therefore, quite correct. If a second gong-gong is played, it will play the same part as the second atoke in the Hatsyiatsya patterns for Gahu, that is, a simple pulse on each of the four quarter-notes of the first gong-gong part, with the option of playing two sixteenth-notes instead of one eighth-note on any or all of the pulses. The atoke itself is only used for Hatsyiatsya patterns, and is not used in the full drumming.

The rattle, axatse, is played in a sitting position, and is struck downward on the thigh and then upward against the open palm or closed fist of the other hand held above it. The down strokes (notes below the line) exactly double the gong-gong, while the upward movements (notes above the line) simply fill in the rests.

The image shows a handwritten musical score for six instruments in Gahu music. The instruments are listed on the left: GONG GONG, RATTLE (UP/DOWN), KAGAN, KIDI, SOGO, and AGBOBA (Master). Each instrument has a corresponding staff with musical notation. The notation includes various note values, rests, and articulation marks. The GONG GONG staff uses quarter notes and rests. The RATTLE staff uses eighth notes and rests, with 'UP' and 'DOWN' markings. The KAGAN staff uses eighth notes and rests. The KIDI staff uses eighth notes, rests, and 'x' marks. The SOGO staff uses eighth notes and rests, with 'x' marks. The AGBOBA (Master) staff uses eighth notes and rests, with 'x' marks. The score is organized into two systems of three staves each, with a double bar line separating the systems.

Example 7-2. *Gahu music.*

Ewe drums are played both with sticks and by hand. In Gahu, all the drums are played with sticks. The Xs in the drum notation indicate muted beats. In kidi and sogo, this is played by pressing one stick down on the drum head while gently striking the head with the other stick. Because of the added tension on the head, the pitch of a muted beat is higher, by about a fifth, than a regular beat. In the agboba, the muted beats are played by striking the stick rather sharply against the wooden side of the drum.

The kagan keeps up the same pattern throughout, and in this respect is closer to the gong-gong and rattle than it is to the other drums. This is generally kagan's role in all Ewe music, and not just in Gahu.

There are many different master drum patterns, and each has a different response pattern from kidi and sogo. I simply did not have time to learn more than this first one. While the master drum makes constant improvised variations on his pattern, which I realistically felt were completely beyond the scope of my short visit to learn and therefore transcribe, the other drums simply repeat their patterns without variation until the master changes. They make the appropriate change then to the proper response pattern, and repeat it without variation. In the patterns above, the master drum begins a sixteenth-note after the gong-gong, and sogo responds on the second quarter of the bell pattern, while kidi answers an eighth-note later. All instruments in this particular section have patterns the same length as the gong-gong, except for kagan, whose pattern is only one quarternote in duration.

Before I became interested in Gahu, my teacher started me off with Agbadza, perhaps the best known Ewe social dance. Although an excellent full transcription of Agbadza, complete with master drum improvisations, appears in Jones's *Studies in African Music*, I offer the following so that readers here may see how the master drum plays a changing signal, changes to a second pattern, and is responded to by the supporting drum. In Agbadza, the master drum is sogo, which is played with the hands, while kidi and kagan are both played with sticks. My transcription is not only simpler than Jones's, it also differs slightly in the master drum patterns and the kidi responses. This is due partly to the fact that there are many different patterns for Agbadza, and also to the fact that my teacher was about 10 years younger and from a different village than the master drummer Jones worked with. Patterns do apparently change in time, and there are also apparently regional differences in performance. Basic patterns, like that of the gong-gong, however, do not change (see ex. 7-3).

The gong-gong pattern in  $\frac{12}{8}$  here is the most common in West Africa. Again, the player will start by playing the first beat on his low bell, but will then continue on his high bell only, unless some musician needs a reminder as to where the first beat of the gong-gong is. The rattle once again doubles the bell with his downstrokes while filling in rests with his upward motion. Here, however, he begins his pattern on the second quarter-note of the bell pattern. Kagan's pattern is somewhat similar to that in Gahu, and once again four kagan patterns equal one bell pattern. Like the bell and rattle, kagan continues without change for the en-

The image shows a handwritten musical score for a piece titled "Agbadza". The score is organized into five horizontal staves, each representing a different instrument or vocal part. From top to bottom, the staves are labeled: GONG, RATTLE, KAGAN, KIDI, and SOBO (Master). The notation is a form of rhythmic shorthand, using vertical stems, beams, and various symbols like 'x' and '7' to indicate pitch and rhythm. The GONG part consists of a series of vertical stems with flags. The RATTLE part features a continuous stream of eighth notes with a 'dash' symbol below the staff. The KAGAN part uses vertical stems with flags and '7' symbols. The KIDI part includes a sequence of notes with 'x' marks, and a circled '1' is placed below the first measure. The SOBO (Master) part features a sequence of notes with a circled '2' below the second measure. The entire score is enclosed in a rectangular box.

Example 7-3. Agbadza.



tire performance. The first sogo master pattern is only four eighth-notes long, and begins with the bell. He is responded to by kidi with a pattern that fills in sogo's rests while doubling sogo's beats with muted beats. After many repetitions with ample improvised variation by sogo, the changing signal of unbroken eighth-notes is sounded by sogo telling all the musicians and dancers that a new pattern will begin. This second pattern is six eighth-notes long, and once again sogo begins with the bell, with kidi responding on the second quarter-note of the bell pattern.

My teacher told me that all drum patterns in Ewe music not only have a series of "nonsense syllables" associated with them to help remember their rhythm but also have a literal meaning. For instance, the gong-gong pattern in Agbadza means, "Do mayi makpo tefe mava" in Ewe or "Let me go and witness this myself and return," while the rattle means "Tso, miayi miakpo nusia tefe" or "Stand up and let us go and witness this ourselves." The kagan pattern means "Kaba" or "Quickly," kidi is saying "Midzo" or "Let us go," and sogo's first pattern is "Do va" or "Get out and come here." These patterns may refer to the Ewe's hasty departure from Benin in Nigeria sometime probably in the nineteenth century.

When it is remembered that there is no indigenous written language in Africa, and when the talking drums are considered, it may be seen that not only are the dances the choreographic reenactments of important historical events in the history of the tribe, but also that there is actually a literal recorded history of these people in the drum patterns themselves.

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 DRUMMING (1971)

88

*Drumming* was composed during the period of over a year between Reich's return from Africa and the premiere in December 1971. Reich composed by taping patterns and playing against them, then rehearsing with members of his ensemble, now expanded to twelve musicians. Three premiere performances were given. The first was in the Museum of Modern Art Film Theater, the second was at the Brooklyn Academy of Music, and the third in New York's Town Hall. The third performance was recorded and published together with full score in 1972, in a signed and numbered special edition of 500, by John Gibson and Multiples, Inc.

For one year, between the fall of 1970 and the fall of 1971, I worked on what turned out to be the longest continuous piece I have ever composed. *Drumming* lasts from 55 to 75 minutes (depending on the number of repeats played) and is divided into four parts that are performed without pause. The first part is for four pair of tuned bongo drums stand-mounted and played with sticks, the second for three marimbas played by nine players together with two women's voices, the

third for three glockenspiels played by four players together with whistling and piccolo, and the fourth section is for all these instruments and voices combined.

While first playing the drums during the process of composition, I found myself sometimes singing with them, using my voice to imitate the sounds they made. This involved using syllables like “tuk,” “tok,” “duk,” and so on. I found that if I used a microphone to make the volume of my voice almost as loud as the drums, but no louder, I could then make some of the resulting patterns very much as if my voice were another set of drums, gradually bringing out one pattern after another.<sup>1</sup> I began to understand that this might also be possible for the marimbas and glockenspiels as well. Thus, the basic assumption about the voices in *Drumming* was that they would not sing words but would precisely imitate the sound of the instruments.

The problem then was to find out what sort of sounds were needed to best imitate these instruments. For the marimbas, the female voice was needed using consonants like “b” and “d” with a more or less “u” as in “you” vowel sound. In the case of the glockenspiels, the extremely high range of the instrument precluded any use of the voice and necessitated whistling. Even this form of vocal production proved impossible when the instrument was played in its higher ranges, and this created the need for a more sophisticated form of whistle; in this case, the piccolo. In the last section of the piece, these techniques are combined simultaneously with each imitating its particular instrument.

The women’s voices sing patterns resulting from the combination of two or more marimbas playing the identical repeating pattern one or more quarter-notes out of phase with each other. By exactly imitating the sound of the instruments, and by gradually fading the patterns in and out, the singers cause them to slowly rise to the surface of the music and then to fade back into it allowing the listener to hear these patterns, along with many others, actually sounding in the instruments.

In the context of my own music, *Drumming* is the final expansion and refinement of the phasing process,<sup>2</sup> as well as the first use of four new techniques: (1) the process of gradually substituting beats for rests (or rests for beats); (2) the gradual changing of timbre while rhythm and pitch remain constant; (3) the simultaneous combination of instruments of different timbre; and (4) the use of the human voice to become part of the musical ensemble by imitating the exact sound of the instruments.

The very beginning of *Drumming* starts with two drummers constructing the basic rhythmic pattern of the entire hour and a quarter long piece from a single drum beat, played in a cycle of 12 beats with rests on all the other beats (see ex. 8-1). Gradually, additional drum beats are substituted for rests, one at a time,

1. An early version of the score has male voices singing resulting patterns in the first section of *Drumming*; these were removed by the composer in 1975 and, instead, one of the drummers plays resulting patterns on the drums.

2. Reich never used the phasing technique after *Drumming*.

① HARD STICKS  
TWO, THREE, OR FOUR DRUMMERS

②

③

④

⑤

⑥

⑦

⑧

The performance begins with two, three, or four drummers (usually two), playing in unison at measure ①. When one drummer moves to the second measure and adds the second drum beat the other drummer(s) may either join him immediately or remain at bar ① for several repeats. This process of gradually substituting beats for rests within the pattern is continued with at least 6 or 8 repeats of each measure until all drummers have reached the fully constructed pattern at measure ⑧.

Example 8-1. *Drumming*, bars 1–8. COPYRIGHT © 1973 by HENDON MUSIC, INC., A BOOSEY & HAWKES COMPANY. COPYRIGHT RENEWED. REPRINTED BY PERMISSION.

until the pattern is constructed. The reduction process is simply the reverse, where rests are substituted for beats, one at a time, until only a single beat remains (see ex. 8-2).

The sections are joined together by the new instruments doubling the exact pattern of the instruments already playing. At the end of the drum section, three drummers play the same pattern two quarter-notes out of phase with each other. Three marimba players enter softly with the same pattern also played two quarter-notes out of phase. The drummers gradually fade out so that the same rhythm and pitches are maintained with a gradual change of timbre. At the end of the marimba section, three marimbas played in their highest range are doubled by three glockenspiels in their lowest range so that the process of maintaining rhythm and pitch while gradually changing timbre is repeated. The sections are

Two or three  
also cymbals

Bars (93) through (100) may be performed by all three, or only two of the players. Rests are inserted in the pattern, one at a time, similar to bars (7) through (21) for the drums, until the pattern has been reduced to a single pulse at (100).

Example 8-2. *Drumming*, bars 93–100. COPYRIGHT © 1973 BY HENDON MUSIC, INC., A BOOSEY & HAWKES COMPANY. COPYRIGHT RENEWED. REPRINTED BY PERMISSION.

not set off from each other by changes in key, the traditional means of gaining extended length in Western music. *Drumming* shows that it is possible to keep going in the same key for quite a while if there are instead considerable rhythmic developments, together with occasional, but complete, changes of timbre to supply variety.

One of the most noticeable aspects of my music has been that it is written for ensembles of two or more *identical* instruments. Starting with *It's Gonna Rain* for identical tape loops moving out of phase with each other, through the other tape pieces *Come Out* and *Melodica*, and into the instrumental pieces, *Piano Phase* for two pianos, *Violin Phase* for four violins, *Phase Patterns* for four electric organs, and the first three sections of *Drumming*, this was necessary because *the phasing process is only clearly audible when the two or more voices moving against each other are identical in timbre*, and therefore combine to form one complete resulting pattern in the ear. To play *Piano Phase* on one piano and one harpsichord would just not work, but to play it on two harpsichords might be very interesting. Because of this necessary matching of timbres, a unique body of



Figure 8-1. *Drumming* performed by Steve Reich & Musicians at Loeb Student Center, New York University, 1973. Left to right: Russell Hartenberger, Joseph Rasmussen, Bob Becker, Leslie Scott, Timothy Ferchen, Joan LaBarbara, Janice Jarrett, Steve Reich, Steve Chambers, Glen Velez, Ben Harms, and James Preiss. PHOTO BY GIANFRANCO GORGONI.

work has been written for multiples of the same instrument. In the last section of *Drumming*, however, the drums, marimbas, and glockenspiels are combined simultaneously for the first time in my music. All the instruments play the same rhythmic pattern, but the drums play it with one set of notes, the marimbas with a second, and the glockenspiels with a third. When one marimba phases against another, they create an overall marimba pattern that is clearly distinguishable from the drums and glockenspiels. It is a similar situation when one drummer phases against the other drummers, or when one glockenspiel player moves ahead of another. The overall sound, of course, becomes considerably richer.

The question often arises as to what influence my visit to Africa in the summer of 1970 had on *Drumming*? The answer is *confirmation*. It confirmed my intuition that acoustic instruments could be used to produce music that was genuinely richer in sound than that produced with electronic instruments, as well as confirming my natural inclination toward percussion. I chose instruments that are all now commonly available in Western countries, (although the history of bongo drums leads back to Latin America, that of the marimba goes back to Africa, and the glockenspiel ultimately derives from Indonesia), tuned to our own tempered diatonic scale, and used them within the context created by my own previous compositions (fig. 8-1).

In 1972, I composed *Clapping Music* out of a desire to create a piece of music that would need no instruments at all beyond the human body. At first I thought it would be a phase piece, but this turned out to be rather inappropriate, since it introduces a difficulty in musical process (phasing) that is out of place with such a simple way of producing sound. The solution was to have one performer remain fixed, repeating the same basic pattern throughout, while the second moves abruptly, after a number of repeats, from unison to one beat ahead, and so on, until he is back in unison with the first performer. The basic difference between these sudden changes and the gradual changes of phase in other pieces is that, when phasing, one can hear the same pattern moving away from itself with the downbeats of both parts separating further and further apart, while the sudden changes here create the sensation of a series of variations of two different patterns with their downbeats coinciding. In *Clapping Music*, it can be difficult to hear that the second performer is in fact always playing the same original pattern as the first performer, although starting in different places (see ex. 9-1).

*Clapping Music* marks the end of my use of the gradual phase shifting process. First discovered in *It's Gonna Rain* in 1965, this process was then used in every piece from 1965 through *Drumming* in 1971, with the exception of *Four Organs*. Starting with *Clapping Music*, I felt a need to find new techniques. *Six Pianos*, *Music for Mallet Instruments*, *Voices and Organ*, and *Music for Pieces of Wood*, all composed in 1973, use the process of rhythmic construction, or substitution of beats for rests, first used in *Drumming*, as well as the process of augmentation similar to that in *Four Organs*.

The gradual phase shifting process was extremely useful from 1965 through 1971, but I do not have thoughts of ever using it again. By late 1972, it was time for something new.

♩ = 160-184

1 2 3

clap 1

clap 2

*f*

Example 9-1. *Clapping Music*, bars 1-3. COPYRIGHT © 1980 BY UNIVERSAL EDITION (LONDON) LTD., LONDON. REPRODUCED BY KIND PERMISSION.

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## POSTSCRIPT TO A BRIEF STUDY OF BALINESE AND AFRICAN MUSIC (1973)

10

Originally published in slightly different form under the title "A Composer Looks East" in the *New York Times*, Sunday, September 2, 1973.

During the summer of 1973, I studied Balinese Gamelan Semar Pegulingan with I Nyoman Sumanthi, a Balinese musician in residence at the American Society for Eastern Arts Summer Program at the University of Washington in Seattle. Earlier (in the summer of 1970) I had studied African drumming in Ghana.<sup>1</sup> I studied Balinese and African music because I love them, and also because I believe that non-Western music is presently the single most important source of new ideas for Western composers and musicians.

Although earlier generations of Western musicians *listened* to many non-Western musics, live or in recordings, it is now becoming increasingly possible to learn how to *play* African, Balinese, Javanese, Indian, Korean, and Japanese music, among others, directly from first-rate native teachers, here in America or abroad. A Western musician can thus begin to approach non-Western music as he would his own; he learns to play it through study with a qualified teacher, and in that process can also analyze the music he is playing in detail to understand how it is put together. During the process of performance and analysis, he will find basically different systems of rhythmic structure, scale construction, tuning, and instrumental technique. Knowledge of these different systems also sheds light on our own Western system, showing it to be one among many.

It was my personal desire to understand the basic differences between African drumming and Balinese mallet playing, on the one hand, and Indian drumming, on the other. After a bit of reading in Walter Kaufman's books on North Indian music, and in Robert E. Brown's Ph.D. thesis *The Mrdanga—A Study of Drumming in South India*, together with some discussions with Indian musicians and students at Wesleyan University, I came to the conclusion that there are three main differences, and that they are closely related. First, Indian drumming, both in the Hindustani (Northern) and Carnatic (Southern) traditions, is basically a solo music, while African drumming and Balinese mallet playing are basically ensemble musics. Second, Indian drumming is improvised within a given framework of a particular tala (rhythmic cycle), while Balinese mallet playing is composed and allows no improvisation. In African drumming, all the musicians have fixed parts, with the exception of the master drummer, who improvises on traditional patterns. Third, the basic rhythmic structure of any tala in Indian drumming, Northern or

1. See the essay *Gabu*, p. 55.

Southern, has one main down beat at the beginning of the cycle, whereas African drumming has multiple downbeats, often one for each member of the ensemble. In this respect, Balinese music is similar to Indian in that it has one main downbeat for the entire ensemble at the beginning of a cycle. It is no surprise then that Indian drumming is for the solo virtuoso, while in African drumming and Balinese mallet playing the individual parts, with the exception of the African master drum, are all relatively simple, and it is in the precise rhythmic blending of the ensemble that the virtuosity lies. Not being a virtuoso, not being interested in improvisation, and being thoroughly committed to my own ensemble that performs music I have composed with repetitive patterns combined so that their downbeats do not always coincide, it may be natural for my interests to run strongly toward Balinese and African music.

Not only African, Balinese, and Indian music, but also Javanese, Korean, Japanese, and many others are having a strong effect on Western musicians. This very real interest in non-Western music can be seen now in composers, performers, and even universities, where the interest in electronics, so marked in the '60s, is gradually giving away to an interest in world music. Along with the obvious benefits of this interest, which include a strong belief in live performance, and the aural or rote teaching of music instead of the exclusive use of scores, there are also some problems. The most difficult of these is the problem of Western composers, like myself, absorbing non-Western music. What can a composer do with this knowledge? One possibility is to become an ethnomusicologist, using the talents of analysis that composers often have to transcribe non-Western music into Western notation and analyse it. This is work of the utmost value, producing masterpieces of scholarship, like Colin McPhee's *Music in Bali*, but it is not musical composition. Alternately, a composer can give up composing and devote himself to trying to become a performer of some non-Western music. This will take many years of study and may, even then, only lead to mediocre performing abilities when judged by appropriate native standards. (If the performance of non-Western music were available for musically gifted Western children and teenagers to study, this would undoubtedly lead to American and European-born virtuosos of non-Western music.) Lastly, one may continue composing, but with the knowledge of non-Western music one has studied, and this is the case for myself and most other composers in this situation.

The question then arises as to how, if at all, this knowledge of non-Western music influences a composer. The least interesting form of influence, to my mind, is that of imitating the *sound* of some non-Western music. This can be done by using non-Western instruments in one's own music (sitar in the rock band), or in using one's own instruments to sound like non-Western ones (singing "Indian style" melodies over electronic drones). This method is the simplest and most superficial way of dealing with non-Western music, since the general sound of these musics can be absorbed in a few minutes of listening without further study. Imitating the sound of non-Western music leads to "exotic music"—what used to be called "Chinoiserie."



Alternately, one can create a music with own's sound that is constructed in the light of one's knowledge of non-Western *structures*. This is similar, in fact, to learning Western musical structures. The idea of canon or round, for instance, has influenced the composition of Renaissance motets, baroque fugues, and then, among others, the music of Anton Webern and my own phase pieces. The precise influence of this, or any structural idea, is quite subtle, and acts in unforeseen ways. One can study the rhythmic structure of non-Western music and let that study lead one where it will, while continuing to use the instruments, scales, and any other sound one has grown up with. This brings about the interesting situation of the non-Western influence being there in the thinking, but not in the sound. This is a more genuine and interesting form of influence, because while listening one is not necessarily aware of some non-Western music being imitated. Instead of imitation, the influence of non-Western musical structures on the thinking of a Western composer is likely to produce something genuinely new.

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 NOTES ON MUSIC AND DANCE (1973) | |

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For a long time during the 1960s, one would go to the dance concert where nobody danced, followed by the party where everybody danced. This was not a healthy situation. Using rock and roll in a dance concert is not the answer, although it would probably be (and actually was) the first superficial answer one might come up with. The real answer is to create a genuinely new dance with roots that go back thousands of years to the basic impulse at the foundation of all dance: the human desire for regular rhythmic movement, usually done to music.

The avant garde dance of the 1960s focused on nondance movements to be performed in concert situations. Walking, running, working with objects, and performing specific tasks were among the genuinely new alternatives to the modern dance of expressive movements of an earlier generation. The basic of the idea of the Judson dance group (Steve Paxton, Yvonne Rainer, etc.) as well as the contribution of Simone Forti, could be summed up as: Any movement is dance. This is the precise equivalent to the basic idea of the composer John Cage: Any sound is music.

There is, however, another and primary sense of these words, where one can say that all sounds are obviously not music, all movements are not dance, and most children can usually tell the difference between one and the other.

While the Judson group was the dance equivalent to John Cage (even more so, curiously, than Merce Cunningham—think of Paxton's *Satisfyin' Lover*, the walk-