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## How Music Plays With Time

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## How Music Plays With Time

In a very real sense, music plays with time. Besides looking at the differences between cultures in the manner in which time is structured and divided, the manner in which musicians play with and play in time also varies from one culture to another. Here we also look at different performance practices which have evolved out of different cultural patterns and how contiguous cultures have passed practices on to each other which in turn have them been modified.

### Prolonging and Compressing

Although the principles of rhythmic organization which exist throughout the world are numerous, they really consist of various ways of arranging and organizing delimited periods of time. These structural principles, the various and complex methods of organizing time, can then be performed at different speeds, according to the range of tempos allowed and preferred within that particular culture. These might appear faster or slower relative to other musics in the same culture and, in turn, can themselves be slowed down or speeded up.

But most of what we have talked about here has been within the realm of culturally defined units of repeatable time - units that can be moved about and executed at faster or slower tempos. In Western “classical” music it is also possible to conceptualize a unit of time - a “measure”, or “bar”- and accelerate a part of it, say, a few beats only, without destroying the sense of the basic meter.

This is a concept with which Westerners are all familiar, certainly in sound if they are not, by chance, acquainted with the description of the practice of *ritardando* and *accelerando*. In Western music these are techniques used to create emphasis, to accentuate or highlight something that is about to occur in the music. By delaying or slowing the tempo slightly at a certain point in the measure, the listener feels anticipation for what may follow. This technique is one of the resources at the disposal of the interpreter of the music, a resource, which along with minute changes in volume and velocity of attack enables the performer to add a layer of increased personal expression to his performance.

It also happens in different cultures, that a flexible treatment of a fixed unit of time, - a measure, for example, can occur as a regularly repeated element of the music. That is to say that the unit of time, or measure, is conceptualized as having a fixed relationship of sub-units within it, a regular number of beats, but that in

interpretation certain of those beats are either shortened or prolonged regularly at each repetition of the measure. This is related to, but quite distinct from the Western *ritardando/accelerando* practice.

One such practice occurs in the realm of the ancient court cultures of the Asian world. In the ancient court music traditions of Korea and Japan there is a practice in which the last beat of each measure is prolonged by as much as 25 per cent during the slowest tempos. The prolongation of the last beat of each measure only occurs during the slowest sections of the music, usually at the beginning of each composition. As the tempo gradually increases in speed, although the tempo would still seem very, very slow compared to Western music, the prolongation of the last beat is gradually decreased until it is no longer noticeable.

The degree of prolongation or stretching is not exactly the same for each measure. It is a little more exaggerated in those measures preceding an important accent in the rhythmic and melodic cycle. Here we have a system in which beats are exaggerated in every measure to give an effect of gravity. This is also used even more strongly to underline important accents in the music. The degree of prolongation of these stressed beats is also affected by the overall tempo of the specific point in the performance, less prolongation at faster tempos. Here we might say that stressed beats are used both as a specific point of emphasis in the rhythmic phrase, but also as an overall element added to create a general atmosphere in the music.

Although it may be difficult to make a hard distinction between these two kinds of modification of the rhythm, a distinction is, nonetheless, of importance. The overall prolonged treatment given the final beat in the slower beginning tempos of the Korean and Japanese court music performances is somewhat like the particular altered stress pattern given the waltz particularly evident when it is interpreted by Viennese musicians. Although the waltz is written in Western notation as in 3/4 meter, there is a slight staggering of the rhythm in the best performances, an effect almost of rhythmic swagger or nonchalance.

## **Delineating with few Strokes**

In Indian Classical music, as we have seen, slower tempos are more difficult to grasp and retain in memory than faster tempos. If one increases the speed enough, a long, slow rhythmic cycle such as one used by a North Indian musician can be eventually perceived, even by someone trained exclusively in European music, as a fixed and regular unit of time without resorting to counting its subdivisions. If, however, an Indian rhythmic cycle were to be speeded it up to a tempo rapid enough that the duration of a complete rhythmic cycle of, say, seven beats could be heard with ease as a single unit of time, this would render it virtually useless to the Indian

musician. The tempo would now be so rapid that there would be no possible scope for interesting permutations of pattern nor for subdivisions of varying sizes.

### **Khyal**

In some musics the tempo of performance can be so slow that metric subdivisions cannot be heard easily, let alone a sense of the entire rhythmic cycle as a single unit of time. For example in North India there is a very strong tradition of singing of a particular type known as *khyal*. Each performance is usually in two sections, a slow *drut* followed by a faster *vilambit*. It is very common for the slower section to be performed in a slow rhythmic cycle of 14 beats called *Juhmra tala*. Not only is the tempo slow, but the khyal style requires that the drummer, that is, the *tabla* player, play in a very unornamented accompaniment texture with ample empty spaces - one which consists mostly of single widely dispersed strokes, and these not usually even on every beat of the cycle. The resulting sound is one of a free, highly but gracefully ornamented voice line supported by a few seemingly very isolated strokes on the drums.

So slow is the tempo and the space between each drum stroke so great that even one familiar with other types of Indian music at first finds great difficulty in sensing the pulse firmly enough to predict where the next beat might fall. The musicians must develop the ability to function accurately and yet sensitively in this style. Certainly the avid audiences for khyal singing would suggest that they, too, are not completely confused by it. Nothing exemplifies the atmosphere of a current North Indian Classical concert than the slow pace of the opening *vilambit* and few sparse strokes of the *tabla* underling the voice line.

### **Sanjo**

In the music of the province, Cholla-do, Korea, there are two related musical forms or styles; an improvised instrumental form called *sanjo* and a vocal form called *P'ansori*. Each of these forms is traditionally accompanied by a single drummer. Both forms make use of a variety of different rhythmic patterns, one of which is a pattern of 12 beats called *chung mori*. This is a slow pattern but certainly not the slowest tempo possible in this music. The style of drum accompaniment in this Korean music is, in many respects, similar to that of the khyal in *Juhmra tala* described above, that is, a slow tempo with a few drum strokes spaced widely apart.

This South Korean improvisatory style has a strong rhythmic flow even in slow tempos. With a few explicit drum beats a clear and moving rhythmic pattern can be felt clearly. Although the highly abstracted style of rhythmic accompaniment used for this music requires careful listening for deeper appreciation, it does draw from rhythms that were traditionally known to all Koreans through the folk rhythms *kutgori* and *chung mori*. Thus Korean audiences thoroughly saturated with the

rhythmic patterns of their folk music could hear these new, more challenging treatments of the same patterns and could recognize and enjoy them. In the sanjo and P'ansori styles fewer drum strokes were used as a matter of style, in part, in order not to distract from the soloist. Once the listeners have recognized a familiar rhythmic pattern from what might at first sound like a few scattered beats, they can now participate in an important way in the performance by mentally filling in some of the implied subtleties which the performers have intentionally left unstated.

This understated approach to the exposition of rhythmic pattern parallels the style of black ink painting widely used in Korea, Japan and China. In this technique one might depict, or better, imply a mountain surrounded by clouds, by merely showing a bit of the mountain and allowing the white of the paper to suggest clouds, sky and nothingness. Another familiar example from Asian brush painting is to depict bamboo in snow. The snow on the bamboo leaves, is in fact, indistinguishable from the white of the paper, but by deft use of the black strokes on the white paper, the bamboo and the snow are filled in the minds of the viewers.

Different perceptions of rhythm are developed gradually over very long periods of time and, in spite of the complexity of the end result, usually without very much in the way of verbal explanation. In the course of the training to be a professional musician in a particular culture, one hears daily a particular practice often enough that it begins to seem perfectly natural and the student will become firmly convinced that there can be no other reasonable way.

## **Compositions for Percussion Alone**

Many musics in the world are organized so that there is both a melodic, and sometimes, harmonic element, which are usually dominant in the structure of the performance or composition. Rhythm, when used as a separate element is most often provided by percussion instruments and is most often thought of as accompanying the melodic harmonic elements. The various approaches to the organization of time in music thus far described have applied both to the rhythmic structure of melodic and harmonic elements as well as the structure of the accompanying percussion element and to the organization of percussion instruments when played alone.

There is, in addition to the use of percussion instruments as accompaniment to voices or other instruments, the use of percussion instruments alone to perform compositions specifically for them. This is not a matter of a different approach to the structure of time, but instead is a recognition in the culture that formal patterns for percussion instruments alone is accepted, enjoyed and encouraged. Such use of percussion ensembles seems to follow no particular pattern of cultural diffusion. They are found scattered about the globe.

Although we have no surviving tradition of it, descriptions by the Spanish

conquerors of the New World describe very precise rhythmic performances by Aztec musicians. The dairies of the priests say that the drums were accurately tuned to certain notes and the rhythmic precision was amazingly impressive. We no longer have any idea what they played because in their zeal to get rid of everything which they presumed to have been derived from the devil, the Spanish killed all the Aztec priests, teachers and musicians.

Some other examples of this type have survived. The drums played for the kings of the Tutsi in Rwanda Burundi are an example. Although they play in patterns based on the sub-Saharan African approach to rhythmic organization and make use of multiple layers of rhythm, this drum music is structured like a series of compositions for a set of six or seven drummers. Instead of being organized simply as patterns, these are compositions with beginnings and endings which are played through and which can then be repeated.

Another example of this kind of organization is to be found in the playing of the Farmer's Bands, now generally known as *Samul Nori* of Korea. These are complex compositions for percussion ensembles that incorporate numerous changes of tempo and rhythm. Although they may sound like spontaneous improvisations to those unfamiliar with this music, if we notice the complexity of the patterns and consider how tightly knit and synchronous the performances sound, it is evident that these are previously composed and memorized compositions of percussion patterns.

One other example of the use of pre-composed percussion compositions occurs in India, both in the Northern and Southern traditions. In the course of accompanying a vocal or instrumental soloist, the percussionist will frequently be allowed to play a solo. The spirit of such percussion solos is to show the drummer's improvisatory skill and imagination. In the course of the performance, the player may introduce previously composed complex patterns of his own creation. He first demonstrates the new pattern by vocally reciting the drum syllables that parallel the pattern and then plays it. The drummer may also quote well known and previously composed compositions of other percussionists, reciting them first and then playing them.

#### **Time Limits in Popular Music**

Except for its earliest beginnings, the history of Jazz has been entirely documented on recordings, and during most of the first thirty years of that history, it was documented on 10 inch 78rpm records which had a duration limit of three minutes. Like popular music in America during the same period the three minute limited imposed by the recording medium had its effect on the music itself. During much of that same period, classical music was recorded on 12 inch 78 rpm records, allowing for a 5 minute duration per side.

During most of that period Jazz musicians simply recorded three minutes of

music on each side of the record, but even when they played in public performances, most stayed close to three, four or five minutes for each piece. And yet, as early as 1929, Duke Ellington tried a daring experiment and recorded the Tiger Rag on two sides of a single 78, followed in 1931 by a recording of the Creole Rhapsody which also lasted six minutes.

Although this seems like a very reasonable attempt to extend the scope of the music beyond the technical limitations of the recording industry of the time, when one realizes that out of the hundreds of 78s in the Jazz and popular field which were produced during that period, Ellington's experiments were among the very, very few it becomes clear that Ellington, or those who advised him, had a vision of what his music required beyond that of most of his contemporaries.

It is also fascinating to hear these pieces now, years later transferred to Lp and find that on Tiger Rag there is almost no change in the tempo from what had been one side of the old 78 to the other. On the recording of Creole Rhapsody, what would have been side two begins with a brief piano interlude in free tempo but then quickly returns to the mood and tempo of side one. Then it is clear that while at the time they were recorded, there was no way for the two sections to have been heard in continuous succession without having two records and two record players, cued to play one side right after the other, Ellington took pains to have the tempo at which side one ended followed as exactly as possible by the tempo at the beginning of side two. He conceived of the two sides as one continuous performance at a time when he probably could not have imagined that they would one day be linked without pause and presented on record as a single six minute performance.

Ellington, of course, lived on into the era of the Lp and was able to make a great number of recordings of his own compositions, most of which went well beyond the old imposed limit of the three minutes per piece. While the three minute limit severely restricted the scope of time resource available for the Jazz and popular music arranger and composer, it imposed very real limitations on the improvising Jazz musicians as well. The usual practice was to divide up the three minutes of the recording with an opening statement of the composition or arrangement followed by a succession of improvised solos and then returning to a repeated statement of the fixed part of the composition.

This left painfully little time for improvisation. In the rather democratic Jazz world in which everyone in the group had to be allowed a solo, three minutes would go by very quickly.

Two of the greatest Jazz improvisers ever were Django Reinhardt and Charlie Parker. There are certainly others who are also great, but these two will serve as examples of the best. Each of these men was a master of improvisation, being able to spin out what appears to be an endless stream of continuously changing musical ideas. The major recorded documents which remain to us of these two artists were

originally recorded on single sides of three minute 78rpm records. One notices with Charlie Parker, that now with the availability of all the alternate takes which were made at the time of the original recording, each take is completely different with virtually no common material from one take to another. Listening to the hundreds of these three minute masterpieces which constitutes most of their surviving legacy and finding little redundancy or no lapses in imagination, one becomes intrigued by the thought of what these men might have created if they had lived just a little longer and had responded to the potential scope provided by the 25 or 30 minutes afforded by the Lp or the entire hour afforded by the CD.

Both Django Reinhardt and Charlie Parker died in the mid 1950s, well after Lp recordings were established. Yet, we have for neither of these artists a very satisfactory example of the manner in which they could develop any particular improvisational idea for a longer period of time. In fact, most of the Reinhardt and Parker recordings left to us contain only a small fraction of the three minutes of each side because of the time taken up by introductions and other soloists.

Therefore, while both Reinhardt and Parker worked within the three minute limitation of the recording technology of their time and Ellington, on the other hand, was, from the beginnings of his long career, experimenting with forms which went beyond this time limit, popular music in America and in most of the rest of the modern world began with this same three minute limitation and even today, only rarely ever moves very much beyond that limitation.

Thus while for Ellington, Reinhardt and Parker, the limitation was a real one imposed by the available technology of their time, for popular music of today this limitation no longer exists. Yet the market, popular taste, the demands of AM radio, etc., have all worked to retain the three to five minute aesthetic until the present day. Although we know that with concentration, longer attention spans are humanly possible, it may be that those who were engaged in the market for popular music, and the Jazz market was traditionally placed in this category by the record companies, decided or observed that the attention span of that audience was and continues to however around three to four minutes.

## **How Ensembles Organize Themselves Rhythmically**

When we play or sing alone we are masters of whatever we choose to do within the limits of our own abilities. Speed and volume can be changed, the pitch can rise or fall and we can change to another tonality or key as we like. When two or more people play together, the procedure quickly gets more complicated. We must establish a set of verbal and nonverbal rules about how we are going to stay together. If its a simple tune we all know, like singing “Happy Birthday” at a party, we don’t need much in the way of preparation. On the other hand, think about how



many birthday parties you've been to when the singing doesn't settle down into uniformity until near the end. Maybe even the simplest singing does need some kind of preparatory coordination.

Whether musicians need to talk much before a performance or not, it is the cultural context which they share which allows them to understand each other musically during the performance. If they talk about how they are going to play or sing, their understanding of the words they use comes about because they share the culture in which these words are defined. In this case we are talking more about shared culture more than shared language although often they are the same. But consider that the members of the Tokyo String Quartet may speak English very well, but they do not need to speak English to play the Beethoven Quartets. Through their training and practice they have absorbed and adopted enough of the culture of the performance of that music that they can play. When a large symphony orchestra plays together it can include members who speak a great number of different languages and may only share one very unevenly. Still, it is the fact that they understand the shared musical concepts required for the performance, regardless of the language with which they are most comfortable that determines the effectiveness of the ensemble playing.

### **Small Ensembles**

Different kinds of music performance are possible for large groups performing together or small groups. More flexibility is possible with small numbers of players or singers, although it is not always the case. Conversely however, the logistics of maintaining communication between performers in large ensembles naturally restricts the amount of freedom that any one individual might have.

Small ensembles of three or four musicians have great possibilities for flexibility and freedom in performance if these are characteristics that have been selected within the culture. In some cultures, for example, those in which the music is meant to provide a ritual or formal function, free improvisation may not have been elected in the culture as an appropriate possibility. However in others, like small Jazz ensembles, North and South Indian classical music and the Sanjo music of Southern Korea, a high degree of spontaneity and collective improvisation has been nurtured.

### **String Quartet Playing**

In chamber music ensembles of many cultures, great flexibility is possible because the musicians can hear each other as well as observe minute physical gestures and movements. The Western string quartet offers an excellent illustration of the ability of a small group of four musicians playing together and making use of very subtle and minute changes in volume, tempo and expression. Although the

musicians must rehearse frequently, their verbal agreements about such matters is far less accurate in controlling and affecting performance than the careful listening which they do while they are actually playing. The Western European string quartet is an excellent and familiar example of a small group of musicians, without a visible director, but capable of performing together some of the most complex and fluid music in the Western tradition. It is a tradition in which careful sensitive listening and balancing with each other, entirely by listening creates a flexible and cohesive ensemble performance.

### **Tempo in Japanese Court Music**

I can still vividly recall now some years ago when I was studying *Gagaku*, the music of the Japanese Imperial Court, how very, very slow the music seemed to me on first impression. I was allowed, after some years, to join in the weekly rehearsals of the court musicians. By then I was quite familiar with the sound of *Gagaku* and with the performance style and tempi use by the court musicians. However, when I joined then in these rehearsals, the tempos at which they performed seemed always just a bit slower than I had anticipated they would be at the start of the each rehearsal.

Familiarity had prepared me for the fact that the music was played slower than anything I had ever played before and that experience was helping to give me some conception of where the tempo would be, but every time we played together I can recall the same slight shock at the length of the first note played, never finding myself completely prepared for how slowly they actually played. Within a few years after leaving Japan, although I continued to be closely involved with *Gagaku*, cultural and perceptual distance between my conception of the very slow *Gagaku* tempi and the actual performance by the court musicians only increased with each year. Most recently, however, in 1988 the court musicians of Japan toured the United States. Now when they played, I marveled at how much faster they played everything than the way I remembered it. When I asked them about this I was told that the younger musicians could no longer hold their breath as long and they gradually speeded the music up to accommodate this change.

### **Large ensembles**

Whenever large groups of performers play together, let us say in groups of ten or more, different principles of organization need to be employed. In the Western European Art music tradition, the large orchestra under the direction of a single conductor who is ultimately responsible for transmitting to the entire group the potentially complex series of changes of tempo and expression that are required for the performance is an example of one model. In many cultures, however, a conductor is not used, or is not visible. The leader of a large ensemble may direct

and control the performance from within the ranks of the group and may not be visible to the audience. In other cultures, formal structures that aid in the organization of the performance may be built into the tradition of the music itself.

The technique of using repeated rhythmic cycles of a fixed number of beats as a unifying principle is to be noted throughout the Far East. As a widespread practice it may date from the long period of several hundreds of years preceding the 13th century Mongol dominance of most of Asia and of the spread of Islam in India. Before this time large ensembles dominated the courts of the great and small nations of Asia.

Although the principle of a fixed and repeated metric pattern can be used in many different types of musical context, it was used to particularly good effect in these large ensembles. It is likely that out of the necessity for maintaining a cohesive ensemble performance with several different instruments, emphasis was placed on formally elaborate fixed compositions with consequently less freedom for scope of individual interpretation for a soloist in the ensemble. What we know of the structure of the music from this tradition shows that it was composed using long and complex melodic forms superimposed on a fixed although often complex rhythmic framework.

The idea for these large orchestras of the ancient world probably came out of the gradually developed need for impressively large groups of musicians to perform music for ceremonial and court ritual. Thus the large ensemble concept grew out of a tradition in which the performance of music was in itself a ceremonial function. The playing of the King's orchestra symbolized the King whether or not he was present.

The music began to take on a slow and stately quality in many areas, in keeping with the gravity and power of the court, but also because the music was intended to provide an important part of the atmosphere of the court, adding to and underlying the other ceremonies. The music of these large ensembles came to function as part of a pervasive atmosphere of the court ceremony much like the pervading and ever present fragrance of incense. Most of the surviving compositions of the courts of Japan, Korea and Central Java are of great length and duration and are played very, very slowly. Far to the West, in Turkey in the Ottoman Empire, this same kind of large ensemble music using slow and complex rhythmic meters also survived. Here too, long complex melodic composition were superimposed over repeated fixed rhythmic patterns, many of which were long and complex in themselves. Who could hear these long and intricate patterns and the interrelationship between them and long, flowing melodic line? We no longer live in times where submersing oneself in the sound of music which is so slow as to almost seem motionless. However, the life of the court in ancient Asia demanded formality and gravity. If the music was to function in providing an atmosphere which could be absorbed almost unconsciously as well as providing a music which also could be listened to then it should naturally

give the illusion of being endless.

It is of course impossible to know today what audiences of the time may have felt when hearing this music. We cannot know either if these same very slow tempos were in use during the heyday of the court music system. We do know that in the court music traditions of Japan and Korea today performances are executed at tempos that are so slow as to be difficult to perceive when compared to the tempos used in most other cultures of the world. Even in those cultures themselves, few can hear the complexities of music with such a seamless and seemingly endless formal structure. But then what, we may wonder, of the perception of the musicians who are expected to provide this endless music?

One of the common characteristics of these ancient court musics, is the use of a single stroke on some deep toned instrument to mark the end of a rhythmic cycle and the beginning of the next. In the music of Central Java, this function is performed by a very large gong. The playing of the large gong is invariably entrusted to one of the oldest, most seasoned and respected musicians in the ensemble, although not usually the leader. In some of the very long compositions, the *gending ageng* type, for example, each rhythmic cycle might last as much as five minutes and therefore the large gong would have only one stroke in that time. In Java it would not be unusual to witness an all night performance in which the oldest musician in the group sits calmly sleeping but awakens quietly and effortlessly in just ample time to gracefully strike the gong at the precise moment which will give logic and meaning to the several minutes of music which had preceded.

When we discussed the manner in which the musicians of India were able to retain an accurate mental conception of a segment of time as long as several seconds, we were perhaps speaking of the same sense of time as perceived by the old musician when playing the gong. When viewed from the vantage point of modern Western practice, to mentally hold the image of a precise period of time lasting several seconds may seem difficult, while doing the same for a nevertheless, there is nothing unusual or innate about the abilities of these musicians. The practices developed out of the needs of the particular tradition and gradually the accurate perception of long periods of time became one of the skills required of a professional musician in these cultures.

#### **The Use of Staggered Melodic Phrases and Rhythmic Cycles in Japanese Court Music (Gagaku)**

Large ensembles of ancient Asia frequently used a structural device in which melodic phrases would be altered slightly over the fixed and repeated rhythmic cycle. Unlike the Indian *raga* and *tala* system, in which the beginning and ending of each rhythmic cycle coincides with the beginning and ending of each melodic cycle, in this ancient formal style, melodies would begin to stray, or enter and end a

different points in the fixed rhythmic cycle. The listener would be expected to become familiar with the rhythmic cycle by hearing the pattern played by the large drum which struck on the main beat, and the smaller drum and small gong which articulated the pattern around that main beat. For the sake of simplicity, let us look only at the contrast of the basic pattern, indicated by measures, in the example below, four measures to each single main beat of the large drum, indicated here by the small circle appearing at the beginning of the third measure.



Fig.47

The beginning of each measure is indicated by the short vertical bar. In the example above, we have a rhythmic cycle of four measure with one strong stroke. In the following example the melodic phrases are indicated by a heavier line under the line for the rhythmic cycle. The Gagaku composition *Shinrario no Kyu* consists of 16 main rhythmic, indicated here by two cycles on each line, and two additional “ending cycles”, here indicated by the ninth line.

This composition is quite regular. In rhythmic cycles 1 and 2, the melodic cycle is two measures long, or two melodic phrases to each strong beat of the drum (indicated by the circle in the third measure). Rhythmic cycle three continues this pattern, but in rhythmic cycle four the melodic phrase covers the entire cycle of four measures. Thus in this composition, the pattern consists of variously alternating melody phrases of two and four measures over a regular four measure cycle.



Fig.48

Now that we have seen the manner in which the basic structure works, let us look at a more complex example. In the composition, *Kyounraku*, given below, we have a rhythmic cycle of eight measures to each main stroke of the drum, a longer rhythmic cycle. This composition is also set in a slower pattern in that each measure now has eight beats rather than four as in the previous *Shinranyo no kyū*. The overall character of this piece, *Kyounraku*, is of a very slow and stately form, although all of the Gagaku compositions are played in a very slow tempo and although tempos may have changed over time, at least in Japan it would appear that the music was usually played rather slowly.

In *Kyounraku* we immediately notice that the melodic phrase is staggered against the rhythmic cycle. In the first cycle, the first melodic phrase ends in the middle of the third measure, the second melodic phrase begins in the middle of the third measure and ends in the middle of the fifth measure, right after the main drum stroke and the third melodic phrase goes from the middle of the fifth measure to the end of the sixth measure. The fourth phrase begins at the beginning of the seventh measure and carries over to the next rhythmic cycle, 2, where it ends at the end of the second measure. By following the rest of the composition in this manner, we can see a very complex relationship between the regular and fixed rhythmic patterns and the irregular melodic phrase.

The organization principle evolved out of the need to create interest and variation between melody and rhythmic accompaniment. Since this was a repertoire performed by a large ensemble, these variations had to be formalized into the composition since collection improvisation with a large group of musicians, a minimum of 8, but usually many more in this case, could not create structures of such complexity, they had to be pre-composed. Actually these relationships were fixed in the formal relationship between the melody and the rhythmic pattern.



**Fig.49** The Burmese *hsaing* ensemble consisting of a drum circle, a gong circle, a gong frame, drums, clappers, bells and small double reed pipe. The ensemble is held together in performance by the subtle control of the leader who plays sitting in the center of the drum circle frame.



**Fig.50** A Goralska String Band from Zakopane in Southern Poland.



**Fig.51** Performances by large ensembles, such as the *Ah-Ahk*, Court music orchestra of Korea, require careful coordination. Without relying on a conductor, the ensemble synchronizes by attentive and sensitive listening to each other.



**Fig.52** A Chinese painting depicting a chamber orchestra in the T'ang Dynasty. There were ensembles of all women musicians as well as men's ensembles. The group is divided into two groups, Left and Right with the same instruments on each side.



**Fig.53** Jamaican String Band. Seemingly loosely organized ensembles such as this make use of silent signals and careful listening to play as a unit.





**Fig.54** A Transylvanian Gypsy band from Tirgu Mures, Romania



**Fig.55** Usually such small ensembles play together with an internalized sense of the tempo and feeling of the music. Under the days of socialism in the countries of Eastern Europe, small ensembles were thought to be improved by making them larger ensembles. Also in order to show that the music had status and high standing a conductor was added, Here in this small Romanian *Taraf*, or band of musicians a conductor has been added to this stage presentation where in fact none was needed.