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PRELIMINARY THOUGHTS ON BURMESE MODES

by
Robert Garfias

Little precise written information exists concerning the theory of Burmese music. Upon closely investigating the present performance practice of Burmese musicians, however, it becomes apparent that a rather complex orally transmitted theory of the music exists. It is never taught as theory *per se*, but the knowledge is acquired as the musician adds one composition after another to his repertoire. It is therefore, the vast body of Burmese music as it is performed today that defines theory.

The basis of the system lies in a set of seven fundamental tones. These are recognized as the material from which all Burmese music is formed. There appear to be different series of these seven tone systems, depending on the sets of instruments used. There also appears to be a slight modification of these same seven tone sets when the human voice is used. The pitches are most often referred to by the numbers one through seven which are modified to describe the names of the individual finger holes of the hne, the multiple reed pipe or oboe which produces them. Since the characteristic Burmese melody type is most often one that tends to descend from a high pitch to a lower one, the numbers of the seven tones are always arranged by Burmese musicians counting from pitch one down to pitch seven, the exact opposite of the system generally used in the West as well as the system developed in Japan and later adopted by the Chinese, to cite only two examples. The names of the seven pitches are as follows:

TABLE 1

1. Than Hman	= "correct sound", the tonic, or fundamental.
2. Hnabauk or Hnitpauk	= "second hole", the second degree.
3. Thoun Bauk	= "third hole", the third degree.
4. Lei Bauk	= "fourth hole", the fourth degree.
5. Nga Bauk	= "fifth hole", the fifth degree.
6. Chauk Pauk	= "sixth hole", the sixth degree.
7. Hkun Hnathan Gyi	= "great seventh sound", the seventh degree.

There appear to be two distinct tuning systems for the basic seven tones of Burmese music. One is used for the chamber music instruments, namely the saung, the Burmese harp, and patala, the bamboo keyed xylophone and the other system is that used for the Hsaing ensemble, the orchestra of tuned drums and gongs. Both are based on the same principle of tonal organization

but differ only in that the series used by the Hsaing musicians places the fundamental pitch, Than Hman, one degree lower than the fundamental used by the saung and patala players. At this point only present usage can be described. Whether this same relationship existed between both ensemble types during the days of the monarchy or not is, for the moment, impossible to say.

It is perhaps too tempting to describe the Burmese seven tone system as being equidistant or at least having a tendency towards equidistance. Why a traditionally non-technologically oriented society should strive toward the philosophic perfection of equidistance rather than basing their tone system on the natural tendencies of their own vocal music is something difficult to defend. Be that as it may, when compared to the Western diatonic series the third degree is a little lower, the fourth degree slightly raised and the seventh somewhat lower giving the overall impression of "neutral" intervals.

Until very recently the piano, which has been used to play both traditional and modern Burmese music for at least fifty years now, was retuned in order to make the "white keys" conform better to the intervals of the Burmese seven tone series. Today, pianists who use unaltered pianos will make chromatic adjustments to better bring out the character of individual modes. A striking example of this occurs when, for example, comparing a piece played in Hkun Hnathan Gyi and then a piece in Lei Bauk Auk Pyan. Both modes have the same fundamental, Lei Bauk, the Western fifth degree or G. In Hkun Hnathan Gyi the player uses F natural and B flat whereas in Lei Bauk Auk Pyan he replaces these with F sharp and B natural. The remarkable thing is that when played on the patala or kyi waing, the gong circle, the same seven tones would be used for both modes, only the voice and reed pipe, hne, making a slight adjustment of these two pitches and deviating from the natural seven tones series used by the other instruments.

Although in general usage there is no term to describe mode in Burmese music, the concept does definitely exist. All the Burmese modes make use of all seven tones but emphasize five of these in each case as the basic tones of the mode. The mode Hkunathan Gyi may be an exception to this in that it is thought to emphasize four basic tones and to have three tones instead of the usual two as additional, or exchange tones. The clearest definition of this system of primary modal tones and secondary tones lies in the tuning of the two important Burmese instruments, the drum circle, patt waing and the harp, saung or saung gauk. These two instruments must retune for each mode. In the case of the patt waing, the upper range of the instrument remains the same, retaining all seven pitches and only the lower range is retuned to produce the five primary tones of the particular mode. The saung strings are tuned to the five main

TABLE 2

Some sample seven tone tunings are given below for different Burmese instruments. Scale degrees are numbered in ascending order, one through seven, but with their Burmese names in descending order given alongside.

Scale degree	Pitch name	Interval in cents.		
		Patala (tuned to Hsaing system)	Kyiwaing I (gong circle)	Kyiwaing II (gong circle)
Highest key	IV Nga Bauk			143
	III Chauk Pauk		195	188
	II Hkunathan Gyi	187c.	179	168
	I Than Hman	163c.	176	176
	VII Hna Bauk	169c.	160	155
	VI Thoun Bauk	175c.	204	172
	V Lei Bauk	180c.	169	184
	III Chauk Pauk	160c.	170c.	165
	II Hkunathan Gyi	177c.	171c.	181
	I Than Hman	159C	174c.	175
	VII Hna Bauk	167c.	153c.	159
	VI Thoun Bauk	179c.	168c.	187
	V Lei Bauk	173c.	175c.	183
	IV Nga Bauk	179c.	154c.	149
	III Chauk Pauk	168c.	183c.	163
	II Hkunathan Gyi	181c.	173c.	187
	I Than Hman	166c.	162c.	193
Lowest key				

pitches of each mode. The secondary tones are produced when required by pressure on the string with the fingers of the left hand close to the neck of the instrument. Other instruments like the xylophone, patala, or pataya, the gong circle, kyi waing and the gong frame, maung waing do not retune and contain all seven pitches. These instruments do not present the physical difficulties met in playing the saung or the patt waing and therefore, whenever one of the secondary tones of the mode is not needed, the player can easily skip over that particular key and sound one of the primary pitches of that mode. It is interesting that, in spite of the availability of all seven tones on these three instruments, the patala, kyi waing and maung waing usually play in a style similar to that of the patt waing and saung. That is, they emphasize the five basic tones of the mode in the lower range by omitting the secondary tones, using them primarily in the higher register, and therefore giving them the character of passing tones, suspensions and appoggiaturas.

The mode names used for the Hsaing ensemble are different from the names used by the harp and the other chamber music instruments. They shall be considered here separately before comparing the two systems. The main instrument of the Hsaing ensemble is the patt waing, which, not surprisingly, is always played by the leader of the ensemble. Perhaps it is more accurate to say that only players of the patt waing are ever leaders of the ensemble. Not only is the instrument the most prominent in the ensemble but the tunings and mode system are most clearly defined by this instrument. The following Table 3 gives the basic tuning patterns used by the patt waing for the main Hsaing modes. The scale degrees are given in Roman numerals in the Western ascending order I through VII. It will be noted that the uppermost octave remains the same in all tunings and that in almost all modes the pitches a fourth below this upper octave also remain unchanged.

Not all of these modes or tunings are in regular use among Hsaing players today. Those most frequently used by Hsaing musicians are Than You: Chauk Pauk, Hkun Hnathan Gyi, Nga Bauk and Patt Sa Bou.

Hsaing musicians recognize the function of the various degrees of each tuning and therefore, besides the "absolute" numbering or naming system for the seven pitches given above, figure one, page one, these names are also reapplied in each of the different tunings to correspond to the shift of the fundamental pitch of the mode. As is the case with so many theoretical systems, there appears to be no simple term used to differentiate between the "fixed" Than Hman system and the "moveable" Than Hman system. Using Than Hman as fairly close to the Western pitch, C, and the Roman numeral degree indications to show the shifting function of the mode degrees, the basic structure of the Hsaing modes is given below.

Tuning

Patt Maing Tuning Patterns

Than You: Chauk Pauk	V VII I III IV V VII I III IV V VI VII I II III IV V VI VII I
Hkun Hnathan Gyi	V VII I II IV V VII I II IV V VI VII I II III IV V VI VII I
Patt Sa Bou or Than You: Pale	V VI I II III V VI I II III V VI VII I II III IV V VI VII I
Ta Chan Pou or Duraka	V VI I III IV V VI I II III V VI VII I II III IV V VI VII I
Nga Pauk	IV VI I II IV V VI I II IV V VI VII I II III IV V VI VII I
Sit Gyi or Hna Pauk	IV VII I II IV V VII I II IV V VI VII I II III IV V VI VII I
Nga Pauk Auk Pyan	IV VI I III IV VI VII I III IV V VI VII I II III IV V VI VII I
Lei Pauk Auk Pyan	V VI VII II III V VI VII II III IV V VI VII I II III IV V VI VII I

Drum name

Doun Ke Gyi
 Hnasit Doun
 Ta Sit Doun
 Bai Taraw
 Bai Tai
 Duloun
 Tai Let Kou
 Tara Let Kou
 Patt Sa Tat
 Nga Pauk Loun
 Lei Bauk Loun
 Thoun Bauk Loun
 Hnabauk Loun
 Than Khon P'ya
 Khun Hnapauk P'ya
 Chauk Pauk P'ya
 Nga Bauk P'ya
 Lei Bauk P'ya
 Thoun Bauk P'ya
 Hnabauk 'ya
 Than Khon Nyunt

TABLE 4

Mode Name

Than You: Chauk Pauk	I c	III e	IV f	V g	VII b
Hkun Hnathan Gyi*	I g	III b	IV c	V d	VII f
Patt Sa Bou	I c	II d	III e	V g	VI a
Tachan Pou	I c	III e	IV f	V g	VI a
Nga Bauk	I f	II g	III a	V c	VI d
Sit Gyi or Hnapauk	I b	II c	III d	V f	VI g
Nga Pauk Auk Pyan	I f	III a	IV b	V c	VI d
Lei Bauk Auk Pyan	I g	II a	III b	V d	VI e
Than You: Hnapauk	I b	II c	IV e	V f	VI g

The Hsaing modes with the exception of Tachan Pou and Than You: Hnapauk appear to fall into two basic types according to the placement of the secondary pitches of the mode and the gaps created in the intervals between the primary tones. These two types are given here with the secondary pitches indicated by an X.

TABLE 5

Type one	I	X	III	IV	V	X	VII
Type two	I	II	III	X	V	VI	X

*Some musicians are of the opinion that degree IV is actually a secondary tone rather than a primary tone in the mode Hkun Hnathan Gyi.

Burmese musicians do not verbally recognize a distinction between these two mode types. A glance at the exact interval structure of the basic seven tone series will quickly indicate that the various modes within each mode type are quite distinct from each other. It is interesting to speculate on the possibility that Burmese musicians may find the individual character of each mode is more significant than the parallel intervallic patterns which can be abstracted from them.

The uniqueness of Tachan Pou can be explained in that it is considered to be a variant form of Patt Sa Bou. It will be noted when looking at the sequence of tunings for the patt waing, that in the second octave from the fundamental, Hkun Hnathan Gyi, degree II, is added and Nga Bauk, degree IV, is omitted. This makes the second octave conform more to the standard Patt Sa Bou mode. Tachan Pou is used especially for those compositions in which Hkun Hnathan Gyi is prominent and must be reinforced by the patt waing. Only the patt waing player faces this difficulty. The saung player can temporarily produce this pitch by stopping the string down one degree. The patala, kyi waing and maung have all the pitches available to them and a temporary shift of tonal emphasis presents no difficulty whatsoever. Therefore, Tachan Pou is better thought of as patt waing tuning than a true mode.

There is also the practice of creating new modal structures by shifting the tonal emphasis from one pitch to another within the same tuning. In this manner two new modes, Chauk Pauk and Hnapauk are created from the Than You: system, although Hnapauk is apparently used only rarely, Chauk Pauk is frequently heard, especially for music of a strong character such as the Myin Gin:, the music which was used before battles to fire up the spirits of the horses and to make them dance or perform complicated maneuvers before going into battle. Chauk Pauk is also used for playing the bein boun, a special composition indicating chase scenes in a play and for the lei gin:, the music of swordsmanship. Compositions such as the last two are the mainstays of the small gong ensembles which accompany Burmese boxing matches and games of chin loun, a game somewhat like soccer played in a circle by a group of men who keep a small rattan ball in the air by hitting it with their heads, shoulders or feet.

One other interesting and unusual modal practice occurs among Hsaing musicians. In certain instances, the musicians may be required to accompany a singer whose voice cannot comfortably reach all the pitches of a particular composition in its correct mode and tuning. In such cases, the patt waing player may retune the drums in order to produce the correct mode at a different pitch. In this way, for example, Than You: can be transposed either up one degree to Hkun Hnathan Gyi (d) or down one degree to Hnapauk (b). This is not a solution which

the musicians find truly agreeable, because although the patt waing can be easily retuned, it is impossible for the bronze gong row instruments, the kyi waing and the maung waing to retune; they must simply move up or down one degree as the case requires. The resultant pitches will not produce as accurate a transposition of the mode as can be produced by the retuning of the patt waing and for this reason the practice is generally unsatisfactory.

Rarely, a composition from one mode may be performed in another mode. This type of modal transposition is called Than Ti: by Burmese musicians. This usually depends on the character of the individual composition. Some compositions are not suitable for such treatment. An excellent example of this practice is the well known composition of the late Sein Be Da, Mingala Byaw Nyunt. It is frequently played in Than You:. However one of his disciples, Shwei Daun:Myaing of Mandalay, performs it both in Nga Bauk as well as in Than You:, insisting that Sein Be Da preferred it in Nga Bauk.

When the patala is used to accompany the voice, it tends to follow the tradition of the saung in its tuning system and terminology. However, it is also used as a basic instrument for practicing and teaching by the Hsaing musicians and in this instance is usually tuned according to the fundamental pitch system of the Hsaing ensemble. In fact, the patala is a little different from the harp in that in present practice, at least, not all seven degrees are regarded as satisfactory for serving as the fundamental of a mode. The preferred fundamentals are Than Hman, Leibauk and Nga Bauk. The interval structures produced by starting on the other fundamentals are too far from the ideal to be considered as satisfactorily usable. There are a few interesting exceptions. There is a special composition called Poun Nou Tei Za, Hkun Hnathan Le Kyou: which was used as a teaching aid because its one short phrase is repeated seven times, each time beginning on a fundamental pitch one fourth higher than the previous starting pitch. This composition is not considered one of the Tachin Gyi, the body of traditional "great" songs, or the standard classical repertoire, and was probably never used in performance but it does illustrate the interesting possibility of modulating through all seven tones of the Burmese system. Of this particular composition, the eminent musicologist, U Kin Zaw, relates an interesting story. After hearing a Burmese traditional musician sing the composition through the seven repetitions and return to the starting pitch, he, because of his Western music experience, could only return to the fundamental pitch after twelve repetitions. Another composition, the Yodaya song, Kain Pan Zoun Hmou Ma La, contains a phrase towards the end of the piece which is repeated exactly, one fourth higher. For amusement some musicians take this phrase through seven repetitions before returning to the original pitch. This also occurs with a song in the Patt Pyou form, Tho

Ra Bo La, which contains a phrase that can be repeated for effect, seven times, although this is not considered to be within the realm of standard practice.

The saung is unique among all Burmese instruments in that it can retune freely, which is also true of the patt waing, but unlike the patt waing, it usually plays alone as an accompaniment to the human voice and therefore is not restricted in any way by the tuning of other instruments in an ensemble. One would therefore expect to find the ideal Burmese tuning systems in effect here. At the same time, however, since the method of tuning the strings is effected by the player himself it is also natural that whatever affects the manner in which he hears the Burmese tuning system will directly influence the manner in which he tunes the harp. Some musicians argue strongly that Mandalay musicians are more traditional in their hearing of the Burmese tuning and that Rangoon musicians are becoming more and more influenced by the Western tuning system. This seems logical in view of the fact that Rangoon musicians are more often required to play in combination with Western instruments, such as the piano for film scores and radio performances.

In theory the modes used by the saung are thought of as having their fundamentals forming a circle of fifths, with seven fifths completing the octave. Today most saung players use only the first four modes, Hnyin Loun, Auk Pyan, Pule and Myin Saing. The largest body of composition in the repertoire can be contained in these first four modes.

TABLE 6

<u>Saung Name</u>	<u>Hsaing and Patala Pitch Name</u>
Hnyin Loun	(C) Than Hman
Auk Pyan	(F) Nga Bauk
Pule	(B) Hna Bauk
Myin Saing	(E) Chauk Pauk
Duraka	(A) Thoun Bauk
Chauk Thwai Nyunt	(D) Hkun Hnathan Gyi
Pyi Daw Pyan	(G) Lei Bauk

For purposes of clarity and simplicity the saung pitches have been given above as starting on Than Hman which is equivalent to the Western C. In traditional practice however, the saung players tune Hnyin Loun (Tham Hman) at a pitch closer to the Western pitch D. In present practice certain of the most outstanding harpists, such as U Ba Than, are tuning closer to the Western pitch C and are therefore becoming more compatible with the pitch system used by the Hsaing players.

At first glance the Saung tuning system would appear to be an excellent example of the use of a system which functions

as a seven tone equidistant system. Although it is difficult to say what the practice may have been in the days of the monarchy, today harpists tend to retune the strings as they move from one mode to another in order to retain something close to perfect fifths above the fundamental.

Although the pitch names given in figure 4 are generally used by all Burmese musicians today, Saung musicians use an older set of pitch names which are synonymous with the names of the modes built on each pitch. Each of these pitch names is thought to be equivalent to the old Indian pitch names. In modal practice one important difference can be noted to modern Indian classical practice. Modes are built up from each fundamental rather than all from the same fundamental as is the case in modern Indian classical music. The pitches are here given in the Burmese order, from high to low.

TABLE 7

Hnyin Loun	C Sa
Pule	B Ni
Duraka	A Dha
Pyi Daw Pyan	G Pa
Auk Pyan	F Ma
Myin Saing	E Ga
Chauk Thwai	
Nyunt	D Ri

For example, when the player changes from Hnyin Loun to Auk Pyan he is moving from a mode with the fundamental on C, Than Hman, to one with its fundamental on Nga Bauk, F. The only string that must in theory be changed is that one producing Lei Bauk, G, which must now be raised up to Thoun Bauk, A. In practice, however, Hnabauk, B, is lowered slightly to make it more compatible with the new fundamental. This same principle is applied when moving from Auk Pyan to Pule. In this case after the necessary strings have been retuned, the player then lowers the strings producing the pitch Chauk Pauk, E, to make it more compatible with the new fundamental, Hnabauk, B. If, for example, the player chooses to move directly from Hnyin Loun to Myin Saing he first lowers the pitch Chauk Pauk, E, slightly and then tunes the other strings to this new fundamental. This sliding tuning practice has led to the distressing glibness with which many musicians refer to, for example, Pule as being "in B flat," or to Myin Saing as being "in E flat." It is entirely possible that this system is actually the direct result of the influence of Western music theory. How long such a tuning method has been used by harpists in Burma is very difficult to say since today the practice is widespread due to the close inbreeding among the teaching traditions and because of the rapid spread of new techniques and methods developed by the outstanding and recognized players.

Although there is no specific way of describing the mode types in use by Burmese musicians when questioned about it, they generally agree that all the Hsaing and Saung modes fall into two basic types and they are generally comfortable in referring to one as the Hnyin Loun or Than You: type and the other as the Pule or Patt Sa Bou type.

The mode Than Hman or Hnyin Loun has one unique characteristic. Three most important pitches are specially identified in this mode alone. These are the fundamental, the seventh degree and the fifth. They are sung to the words taya, tayi, tayo, respectively and from a kind of basic orientation to the mode. Melodic passages based on these notes are thought to be characteristic of pieces in Than Hman.

Burmese modal theory recognizes a further subdivision of tonal function beyond the usual delineation of primary and secondary pitches in each mode. In the present practice of Burmese traditional music the natural consonance for a pitch to be stressed in a composition is the pitch lying a fifth below it. These consonances are used not only as simultaneously sounding concordances but frequently and especially in the course of the cadential phrases, Ado: or Adaw, this supporting pitch alternates with main pitch in a variety of melodic patterns emphasizing the latter. To the Western listener, long accustomed to hearing cadential patterns built around a fifth and its inversions as a dominant to tonic relationship, final cadential patterns on the fundamental of the mode sound deceptive as though they were shifts of tonal center to a new fundamental a fourth higher. This set of supporting consonances, their intervals fixed by the tuning of the pitches in the mode, adds an additional layer of character to the quality of the mode.

Burmese musicians recognize different types of songs within a single mode according to the starting and ending pitches of the particular song. Songs in Than You:, for example, may be Than Hman - Than Hman Cha, beginning on Than Hman and ending on Than Hman or ThanHman - Chauk Pauk Cha, beginning on Than Hman and ending on Chauk Pauk, or Chauk Pauk - ThanHman Cha, beginning on Chauk Pauk and ending on ThanHman.

In contemporary Hsaing and chamber music practice there are a number of pitches which can be produced in each mode only by the voice and hne or palwe, the end blown flute. These pitches are slightly different from those produced by the instruments of fixed pitch. The tuned instruments, the patt waing and the saung follow the pitches of the instruments of fixed pitch. This would indicate that the discrepancy between these pitches is deliberate and a matter of preference rather than a simple necessity. Particularly noticeable in the lightly ornamented parts of voice or wind instrument line, these brief departures from the basic mode system heard on the other accompanying instruments is one of the most subtly beautiful aspects of the Burmese tradition.