

RESEARCH REPORT

Sacred *Rgya-gling* Music of Tibetan Buddhism: A Culturally Specific System of Notation

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A considerable body of literature is now available on the general topic of Tibetan Buddhist music, both vocal and instrumental. However, there exists a void in literature specifically addressing the Tibetan double-reed aerophone, the *rgya-gling* (oboe), and its music. The *rgya-gling* is used in ritual instrumental music, that is, 'music produced by external agents' (*rkyen gzhan las 'byungba'i rol mo*), played in the Tibetan monastic ensemble *rol cha*.

Tibetan monastic ritual music is antiphonal: loud orchestral *rol cha* sections alternate with quiet unison chanting sections. Although all the monks chant, generally only about eight to twelve monks play instrumental music. All the instruments of the *rol cha* are played in pairs and symbolise method and wisdom, the essence of the path to enlightenment. Although the *rgya-gling* has a secondary status in the *rol cha*, it clearly deserves scholarly attention and analysis. Whilst emphasising the importance of the cymbals in the *rol cha*, Ter Ellingson aptly notes: 'to identify the musical functions of the other instruments as secondary is not to assert that they are trivial. Each instrument makes its own special contribution to the ensemble music.'¹

The *rgya-gling* literature is dominated by Welsh ethnomusicologist Peter Crossley-Holland and, more recently and most significantly, American ethnomusicologist Ter Ellingson. In his exemplary dissertation 'The Mandala of Sound,' Ellingson discusses the literature available on several aspects of *rgya-gling* music, paying particular reference to its role in the *rol cha*. As is appropriate, he clarifies previous scholastic errors, such as Crossley-Holland's statement that '[t]he sacred shawm is the only melodic instrument in the Tibetan Buddhist rituals,'² and again in another article by the same author: 'The only melody instrument in the monastery ensemble is the shawm.'³ Ellingson clarifies the melodic function of the *rgya-gling* when he writes that 'the

¹ Ter Ellingsen, 'The Mandala of Sound,' thesis, University of Wisconsin, 1981, 636.

² Peter Crossley-Holland, 'Rgya-gling Hymns of the Karma-Kagyu: The Rhythmitonal Architecture of Some Tibetan Instrumental Airs,' *Institute of Ethnomusicology: Selected Reports* 1.3 (1970): 80.

³ Peter Crossley-Holland, 'The Religious Music of Tibet and Its Cultural Background,' *Proceedings of the Centennial Workshop on Ethnomusicology, University of British Columbia, Vancouver, 19-23 June 1967*, ed. P. Crossley-Holland (Vancouver: Government of British Columbia, 1967) 82.

rgya-gling is the only instrument of the ensemble to play discrete-pitch *rta* melodies.⁴ *Rta* melodies are understood in the Tibetan ritual context to comprise a succession of organised pitches in much the same way as the term 'melody' is generally perceived outside of Tibet.

Considerable interest has been shown in the *rgya-gling* from Western fieldworkers who have issued commercial recordings. However, its inappropriate prominence in the resultant audio 'mixes' (due to poor microphone placement), as well as the frequent inclusion of *rgya-gling* passages in the excerpt choices of the many available commercial recordings, highlight the mistaken perception that the 'melody instrument' is the most important of the ensemble. Nevertheless, such recordings have also disseminated excellent musicianship and invited musicological attention.

Crossley-Holland, in his 'Rgya-gling Hymns of the Karma-Kagyü,' presents detailed analyses of two unaccompanied 'airs' recorded in Sikkim in 1961.⁵ His findings are limited to discussions regarding melody, modes, compass, and rhythmic analysis. Crossley-Holland's most substantial conclusion is the locating of a 'scale' unique to Tibet containing the tonal material D, E, F-sharp, G-sharp, A, and C-sharp.

These two principal writers contribute a useful and comprehensive overview of Tibetan music, but only the skeletal beginnings of research into *rgya-gling* music. Omitted from their findings are detailed transcriptions and analyses of *rgya-gling* intonational and ornamenting characteristics. It is the purpose of this paper to take up where Crossley-Holland and Ellingsen left off: I present preliminary findings on three characteristics of *rgya-gling* music—transcription, ornamentation and intonation—and introduce a culturally specific method of transcribing *rgya-gling* music. More extensive findings will follow my fieldwork trip to Tibet in 2001.

The Recordings

My first transcription is from *Lama Norbu Gyamtsho*, the ritual dedicated to Padmasambhava, from the LP *Sacred Dances of the Rituals of the Nyingmapa and Drukpa Orders from Nyimalung and Tongsa*.⁶ The music was recorded by John Levy at the Nyingmapa sect's Thimpu monastery in eastern Bhutan on a Nagra S recorder in 1971 during the Teschu Festival of sacred dance in honour of Padmasambhava. The remaining transcriptions are taken from *Tsedrup*, meaning life enhancement, from the CD *Tibet: The Heart of Dharma*.⁷ The recording was made by David Lewiston in April 1981 in the Khampagar Monastery situated in the Kangra valley in the foothills of India's western Himalayas, during the empowerment ritual proceedings. These two recordings were chosen because they exemplify high quality musicianship, and not with a view to making stylistic comparisons or comparative analyses.

Transcription

It is my primary aim to present a culturally specific method of transcribing *rgya-gling* music. Secondly, I aim to make an objective investigation into *rgya-gling* intonational characteristics through the use of spectral analyses. Thirdly, I discuss the complex matter of ornamentation.

⁴ Ellingson, 'The Mandala' 564.

⁵ Crossley-Holland, 'Rgya-gling Hymns.'

⁶ *Sacred Dances of the Rituals of the Nyingmapa and Drukpa Orders from Nyimalung and Tongsa*, Tibetan Buddhist Rites from the Monasteries of Bhutan, vol. 2 (Lyricord LLST 7256, 1971), Side A Track 3.

⁷ *Tibet: The Heart of Dharma. Buddha's Teachings and the Music They Inspired* (Ellipsis Arts 4050, 1981) Track 5.

My intention in the transcriptions is to make the notation look, as far as possible, the way the music sounds. I have chosen to use a modified staff which uses only lines, and not spaces, to best represent the research findings. In trying to notate *rgya-gling* pitch accurately, I am indebted to Jacqueline Pugh-Kitingan,⁸ whose method of transcribing Papuan New Guinean Huli hiriwula overtones uses a similar modified approach, perhaps influenced by Mantle Hood.⁹ I am not aware of any other transcriptions which omit the use of spaces, and only use lines spaced according to the frequencies of the notes being transcribed. All the pieces discussed in this paper sound like they were played using the standard required circular breathing technique *rgyun*. Consequently, tie and slur symbols have not been used in the transcriptions, since their inclusion would imply the use of a player's tongue to articulate certain notes, but such articulation is not audible.

In reference to Tibetans' notation of their own music, the Tibetan scholar Lhalungpa writes:

it does not provide a complete and standardised means of reading any piece of music, as with Western notation. Rather, it is a means of giving precision to the interpretation of music that is already known as regards its basic elements ... Each different tradition of ritual music has evolved its own notation, within the general pattern of a 'musical graph.'¹⁰

The descriptive transcription to which Lhalungpa refers raises the question of where and how melodic lines are to be ornamented. In the absence of this cultural knowledge, it would seem a logical alternative to develop a prescriptive transcription. The use of detailed prescriptive transcriptions, notated on a culturally specific staff, documents the characteristics of Tibetan music while also providing an invaluable learning tool for Western musicians studying the music of what has become a transplanted culture. This allows Western musicians to participate in religious ritual with a traditional musical instrument being played using its culturally specific stylistic nuances.

My transcriptions were completed in three progressive stages. In the first, the Bhutanese *rgya-gling* piece is transcribed using the customary Western staff (see Figure 1). In the second, I present objective information obtained from spectral analyses of each pitch used in the Bhutanese piece and also the Tibetan piece recorded in India. In the third stage, the frequency readings revealed by the spectral analyses are used to modify the culturally tainted staff used in Figure 1 to a culturally specific staff.

To understand unfamiliar music, perceptual and psychological changes are required of the listener. A modified staff assists the listener to make this necessary psychological transition. Further, the development of an appropriately modified system of notation simultaneously removes the cultural discolouring inherent in the rigid staff. I believe it is useful to add to the modified staff a detailed yet almost sight-readable method of transcribing the elusive and complex ornamental style which is so integral to *rgya-gling* music. We would then have arrived at a culturally specific method of transcription which both accurately presents what is heard, and is also of pedagogical value.

⁸ Jacqueline Pugh-Kitingan, 'Huli Language and Instrumental Performance,' *Ethnomusicology* 21/22 (1977): 215-19.

⁹ Mantle Hood, *The Ethnomusicologist* (Ohio: McGraw, 1971) 87.

¹⁰ Lha Lung Pa, 'Tibetan Music: Secular and Sacred,' *Asian Music* 1.2 (1969): 6

Figure 1: *Lama Norbu Gyamtsho*, first entry.

The image displays a musical score for the first entry of *Lama Norbu Gyamtsho*. The score is organized into seven systems, each consisting of a vocal line and a piano accompaniment line. The vocal line is written in a staff with a treble clef and a key signature of one flat (B-flat major or D minor). The piano accompaniment is written in a staff with a bass clef. The score includes various musical notations such as notes, rests, and dynamic markings. The first system is marked with a '1' and includes the instruction 'ritardando'. The second system is marked with a '2' and includes the instruction 'ritardando'. The third system is marked with a '3' and includes the instruction 'ritardando'. The fourth system is marked with a '4' and includes the instruction 'ritardando'. The fifth system is marked with a '5' and includes the instruction 'ritardando'. The sixth system is marked with a '6' and includes the instruction 'ritardando'. The seventh system is marked with a '7' and includes the instruction 'ritardando'. The score concludes with a double bar line.

Intonation

In order to establish the intonation used in *rgya-gling* music, I made a spectral analysis of pitches used in both pieces (see Tables 1 and 2). The analysis software used for this purpose was Sonic Foundry's *Sound Forge* version 4.5, which is a sophisticated and flexible audio recording and editing programme. The software has the ability to display and analyse recorded sound material in real time from digitised information. The manufacturers have refined a method of achieving the most highly accurate readings of pitch and amplitude parameters. Recorded samples of the *rgya-gling* notes being analysed were double-checked against several entries of the same notes to ensure accurate findings. Two calibrated sample tones were internally generated before samples were taken to ensure an appropriate pitch referent.

Since *rgya-gling* compositions use at most six notes in an octave, it is not always necessary to include a fifth line in the staff. If we space the selected number of lines, in most cases four or five, according to the exact frequency—measured in Hertz, or cycles per second (cps)—of a transcribed pitch, we will have a staff consisting of unevenly spaced lines on which to notate the characteristics of Tibetan music (see Figures 2 and 3). The pairing of a prescriptive transcription with the additional objective information obtained from spectral analysis provides us with information allowing us to notate frequency far more acutely than can diacritical markings with accompanying and comparatively inaccurate statements such as 'this note a little sharp,' etcetera.

Figure 2: *Rgya-gling* transcriptions on a modified staff; *Tsedrup*, first entry.

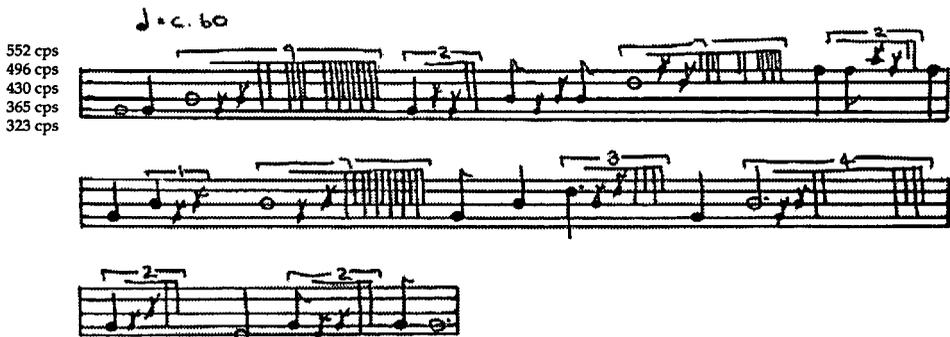


Figure 3: *Rgya-gling* transcriptions on a modified staff; *Tsedrup*, second entry.

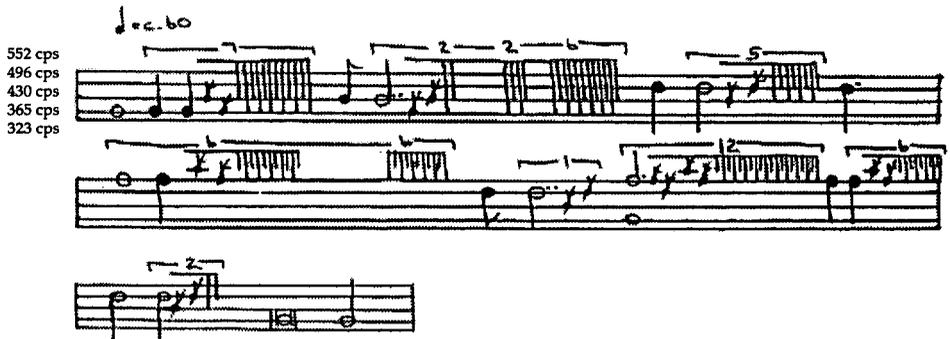


Table 1. Range of *rgya-gling* frequencies from *Lama Norbu Gyamtsho*, transcribed in Figure 1.

Note	Lowest cps	Middle cps	Highest cps
D4 first sample	294	301	312
D4 second sample *	312	323	334
F4	354	365	376
G4	398	407	418
A-flat 4	420	430	441

* two samples of the note D were analysed. The duration of the second sample was considerably longer than the first, which may account for its wider frequency range, especially when one considers that *rgya-lings* are played in pairs. It is not used in the transcriptions here.

Table 2. Range of *rgya-gling* frequencies from two passages (yielding the same results) of *Tsedrup* ('life enhancement'). The notes in this table are identified by their middle cps reading.

Note	Lowest cps	Middle cps	Highest cps
1	311	323	334
2	354	365	376
3	420	430	440
4	484	496	506
5	548	552	571

As one might expect, the shorter the duration of a note, the less fluctuation in pitch there was. My preliminary findings show that every note analysed in all four transcriptions recorded pitch fluctuations of 20 to 22 cps. Tables 1 and 2 detail the frequency of each note from its lowest to its highest frequency. It was found that the frequency listed in the middle column was the longest sounding frequency. Consequently, the transcriptions use these middle frequency readings as an approximate referent for stave lines in the modified-stave transcription. The tables make clear the elastic nature of *rgya-gling* intonation.

One can conclude from tabulated results that a Western stave does not accurately represent the characteristic non-tempered intonation of *rgya-gling* music. For example, the interval f to g in the Bhutanese transcription is a difference of 42 cps (see Table 1). However, the differences between notes 3 and 4, and notes 4 and 5, in *Tsedrup* are 66 cps and 56 cps respectively. If one were to use a Western stave, all three intervals would be transcribed as equal tones. Consequently, each pitch in Table 2 and therefore in the modified-stave transcription in Figures 2 and 3, is identified by its actual frequency rather than by the first seven letters of the alphabet.

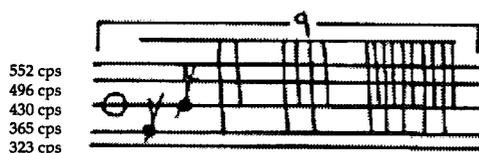
Ornamentation

As previously stated, in the modified stave five parallel horizontal lines are spaced according to the various frequencies they represent. Similarly, the complex rhythm of the ornamental notes is represented by a series of vertical lines meticulously spaced on the page corresponding

to the point in time each such note is sounded. The placement of the vertical lines is of critical importance if we are to represent accurately the rhythmic complexity of *rgya-gling* ornamentation.

In Figure 4, taken from the first bracketed cluster of notes in Figure 2, the two ornamenting pitches are notated as grace notes. Subsequent ornamental notes of this cluster are notated with headless stems which end in the same area of the modified staff as the grace notes which precede them. This indicates that they are the same pitch as the first grace notes. The numeral placed above a bracketed cluster indicates how many times to play each of the main note and the auxiliary note; each move to an auxiliary note and return to the main note is counted as one in the ornamental passage. Thus in Figure 4, nine such ornamentations are played, the relative speed of execution being indicated by the measurable difference in spacing between the headless stems.

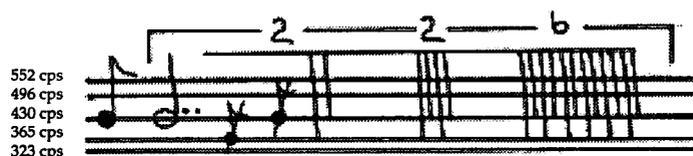
Figure 4: *Tsedrup*, first entry.



The absence of note heads and the numeral and bracket are designed to facilitate easier reading. The modified staff provides the non-Tibetan musician with an easily recognisable graphic sound impression which assists in the reproduction or emulation of a long-established Tibetan performance practice. Every ornamented note in *Tsedrup* (see Figures 2 and 3) is transcribed in this manner.

In Figure 5, an isolated phrase from Figure 3, the note cluster is divided into four parts, the first of which is an unornamented quaver. This note is not included in the bracket because it is not ornamented. The next three parts are of equal duration. The first two comprise two trills, with the second upper note in each case sustained for a short time. The final part of the bracketed cluster comprises six trills. These isolated phrases, Figures 4 and 5, exemplify how the modified method of notating *rgya-gling* ornamentation facilitates easier reading.

Figure 5: *Tsedrup*, second entry.



Where clusters have more than two notes of different pitches ornamenting the main note, such ornamental notes are also notated as grace notes. Any notes following this second group of grace notes are also notated without note heads, as in Figure 6. The ornamental note

transcribed as a grace note on the only upper ledger line is too short for its frequency to be measured accurately.

Figure 6: *Tsedrup*, second entry.

