

UMAKHWEYANE: A MUSICAL BOW AND ITS CONTRIBUTION TO ZULU MUSIC

by

DAVE DARGIE

Musical bows

Nearly all musical bows used in the indigenous music of southern Africa are single string melody instruments.¹ The player uses the overtones of the string to produce melody. This is done in various ways according to how the bows are constructed, what sort of resonator is used, and how the bow is played. Some bows have an attached resonator, with others the player uses her/his mouth as resonator. Bows may be played by percussion (striking the string), by plucking, and by friction (rubbing the string or the bow stick).

When it is played the bow string vibrates as a whole and also in partial vibrations (halves, thirds, quarters and so on). The vibration of the full length of the string produces the fundamental tone (for example F), the partial vibrations produce overtones. Half the string gives the first octave (F'), 1/3 gives the fifth (C'), 1/4 gives the double octave (F''), 1/5 gives the major third (A''), 1/6 gives the fifth an octave higher (C''). These tones build up the major triad F-A-C (see Example 1 on page 69). The resonator makes the overtones audible. With many bows the fundamental tone is not easily audible – the most audible tone is the octave. With many bows the full chord can be heard when the string is vibrated.

A player using a bow tuned to the fundamental tone F is able to use the tones F, A and C as melody tones. The player can select the melody tone in different ways, depending on the resonator. With a mouth-bow, the player shapes the mouth in the same way as a player of the Jew's harp. If a resonator is attached to the bow, there will be a hole in the resonator to allow the overtones to be heard. If the resonator is a calabash attached to the bow stick, the player will hold the bow with the hole in the calabash close to the player's breast, and then open and close the calabash to release or damp the overtones. The more open the hole or the further the hole is from the player's breast, the higher the overtones which will emerge. As the hole is closed or moved towards the breast, the overtones are damped, starting from the highest. In this way the player follows the melody (see Figure 2 on page 68). The overtones below the melody tone will often still be audible, so that the bow produces both melody and harmony.

¹ I have recorded 21 different musical bows in southern Africa. Of these, only one was not a melody instrument. This was the Kavango (Namibia) *lipuruboro*, a hunting bow used as a rhythm instrument. (Found on the CD *Magical Musical Bows*, in the *Dargie Series* – see Recordings of the songs on page 80)

If the player needs to use a melody tone other than F, A or C, then another fundamental tone must be employed. The player may hold or touch the string to shorten its full vibrating length. This will provide a second fundamental tone higher than the first. If this second fundamental tone is G, then the overtones of the G major chord will become available as melody tones, that is, G, B and D. The player can then use a two-chord pattern a whole tone apart (F major-G major), and the available melody overtones form a hexatonic scale F-G-A-B-C-D.

As the player follows a melody using this scale, she/he must continually hold and release the string, changing the fundamental tone according to the melody tone which is needed. So there will be a constant shift between the tonalities of F major and G major, simply referred to as “tonality shift”, in this case a whole-tone tonality shift. If the player uses another interval, such as the semitone interval then the tonality shift is a semitone. All Xhosa musical bows use a whole-tone tonality shift. The Zulu *ugubhu* bow uses the semitone shift.² Some bow players using tonality shift do not use all the available overtones for melody. Kavango players of the *kaworongongo* bow use three tonality shift patterns: whole tone, minor third and major third; but they tend to omit the third of the chords, so that the resultant scales have only four tones (for example, F-G-C-D), with a tonality shift between open fifths (F-C and G-D) rather than between major chords.³ If the note B is omitted from the Xhosa tonality shift scale, then the resultant is the pentatonic scale F-G-A-C-D. This scale occurs in music all over the world; I will refer to it and its transpositions as the “classic” pentatonic scale, to differentiate it from other five-note scales such as the equalised pentatonic scale used in Ugandan xylophones.

Another way of providing a further fundamental tone is to brace the musical bow, that is, to pass a loop or attachment from the bow stick over the string, dividing the string into two sections. In the Ovambo *okamburumbumbwa* (identical to the Brazilian *berimbao*)⁴ the brace is placed near the end of the string, and the short section of string is not played. Some bows are braced near the middle of the string, so that both sections of the string may be played. The two sections are tuned to some interval, for example, a whole tone or a minor third. The player then changes tonality by playing the different sections of open string. The player may obtain further fundamental tone(s) by touching (and hence shortening the vibrating length of) one of the open sections of string (see Figure 2 on page 68). In this way a three-way tonality shift is possible. With braced bows it may not be easy to hear and use overtones higher than the third partial (the double octave). The most audible tones are the octaves and the fifth.

² Demonstrations of bow overtones (using Xhosa tonality shift) are on the *Dargie Series* CD *Make and Play your own Musical Bow* and on the DVD *Xhosa Music introduced by Dave Dargie*.

³ Kavango tetratonic scales: recordings of *Kaworongongo* and songs using such scales are on the CDs *Musical Bows of Namibia* and *Missa Namibia* in the *Dargie Series*.

⁴ Cf. the *Dargie Series* CD *Musical Bows of Namibia*, and “Musical bows in south-western Angola, 1965”, by Gerhard Kubik, in *African Music*, 5(4), 1975/6.

Umakhweyane

In Zulu, the middle-braced calabash-resonated percussion musical bow is called *umakhweyane*. Kirby reports (1968:205) *umakhweyane* as being found in South Africa “only among the Venda, Tshopi, Thonga, Transvaal Sotho, Swazi and Zulu”. During my work for Lumko Institute (1977-1989) I encountered and recorded the Zulu *umakhweyane*, the Swati *makhoyane* (in Swaziland), and the Tsonga version (in South Africa) called *xitende*. *Umakhweyane* is usually about one and a half to two metres long, with wire string.

- A: bow stick
- B: string
- C: calabash
- D: pad between calabash and stick
- E: bracing loop
- F: beater (light stick or reed)

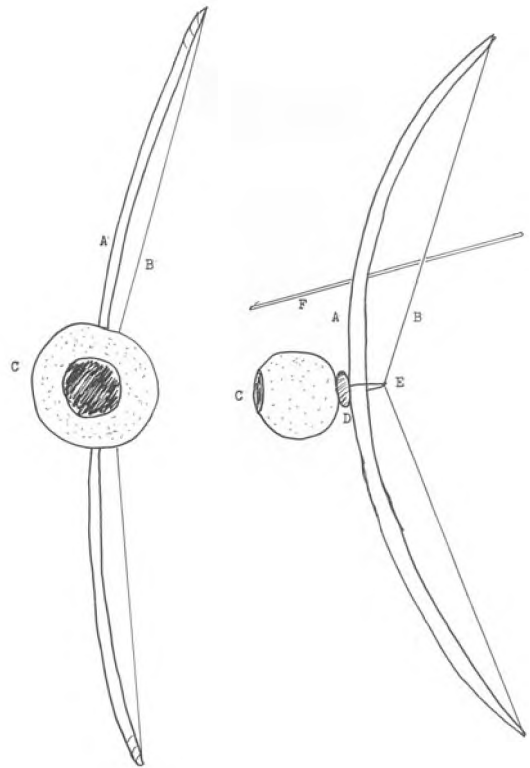


Figure 1: *Umakhweyane* viewed from the front and from the side.

When based from 1979 to 1989 at Lumko Pastoral Institute, which was situated near Lady Frere in the Thembu Xhosa Glen Grey district, I took every opportunity to record local indigenous music, my special interest being musical bows. One of the church musicians with whom I worked was Zulu Benedictine Brother Clement Sithole, who composed many church songs, including a number which he sang with his *umakhweyane*.

I not only recorded and studied his bow songs,⁵ but also, as a result of his assistance, was able in 1981-1982 to get recordings of songs on the rare *ugubhu* bow. I recorded solo *ugubhu* songs by Princess Phumuzile Mpanza (like well-known Princess Magogo, also a daughter of Zulu King Solomon), Mr Bangindawo Mpanza, Princess Phumuzile's husband, and group songs performed with *ugubhu*. At the same time I recorded a number of other Zulu bow songs, including songs with *umakhweyane* by several performers.⁶

The Work of Rycroft

David Rycroft (Rycroft 1975/6), writing about the bow songs of Princess Magogo, concentrates on her *ugubhu* songs. He mentions her songs with *umakhweyane* (58), but says that "she does not have as high a regard for it as for the *ugubhu*. She maintains that it is not truly a Zulu instrument, but was borrowed from the Tsonga of Mozambique". This statement confirms Kirby's claim that it had been adopted in "relatively recent times." Rycroft further notes that *umakhweyane* was more widely distributed than *ugubhu*. He suggests (60) that *umakhweyane* "is much more convenient to play (than *ugubhu*), which may have contributed to its popularity as a replacement". Rycroft then concentrates on her *ugubhu* songs. He does not transcribe any *umakhweyane* songs, nor does he describe how she played *umakhweyane*. When in 2002, I was at last able to return to my Zulu bow recordings of 1981-82, to transfer them onto CDs and properly written up, I was fortunate again to get the help of Brother Clement, who transcribed the song texts from the recordings. During this work the power of the *ugubhu* songs became clearer to me, but I also realised that the *umakhweyane* songs deserved attention because of Rycroft's lack of attention to it and because of the contribution the sounds of this bow have made to Zulu musical style.

Analysis and musical style

Methods of analysis used to study African music include use of western systems of music analysis in order to identify the musical style elements, while another is to try to find the musicians' own understanding of their music. Due to the circumstances described, I had only enough time to make the Zulu bow recordings in the early 1980s. It was not possible to have the follow-up discussions with musicians which would have been desirable. Unfortunately, I have never been able to return to Nongoma, and I doubt I would find the bow players again since the youngest of the three *ugubhu* players was 79 years old in 1982. However, I have had many opportunities to work with traditional Xhosa musicians in the interim, so perhaps I can offer a few insights from the Xhosa side. Since both Xhosa and Zulu belong to the southern Nguni population group, it is hoped these insights can add some balance to my attempts to analyze Zulu bow music.

⁵ Cf. the *Dargie Series* CD and booklet *Brother Clement Sithole O.S.B. – Zulu Liturgical Compositions*; Brother Clement's *umakhweyane* songs are also on the CD *Zulu Bow Songs III*.

⁶ The bow recordings from Nongoma and Glen Grey District, and Brother Clement's bow songs, are on the CDs *Zulu Bow Songs I, II and III* in the *Dargie Series*.

Xhosa musical terminology and conceptualisation

Xhosa traditional musicians do not think or speak about music in European ways.⁷ Terminology is concrete and people-orientated, not abstract and by definitions. “Music” in English must be expressed by “*ingoma*” – songs – in Xhosa. Music is an abstract idea, songs are something done by people. A would-be bow player must learn by observation and imitation. There is little or no detailed teaching as in western music pedagogy. People learn to grasp things as a *Gestalt* – an experiential whole. I used this type of learning all over southern Africa in spreading marimba playing for use in church music. It took me eight months in 1979 to teach the first Lumko marimba group to accompany a complete marimba mass, teaching song by song and part by part. It took that group just two week-ends to teach the entire marimba mass to players at a neighboring mission when that mission acquired a set of marimbas, because the second group could observe the songs as whole performances.

Western concepts reflecting musical style, such as melody, harmony, counterpoint, rhythm, structure, form, scale and so on do not enter into traditional Xhosa music terminology in the European way. Some traditional terms do relate fairly directly to European terms: *ukuhlabela*, to lead a song; *ukulandela* or *ukuivuma*, to follow a song. These terms directly refer to call-and-response technique. (And both these terms have been abused to mean simply “to sing” in some dictionary-type translations.) Furthermore, some traditional terms imply style elements. For example, the Thembu Xhosa term *izicabo* refers to the sung text lines of a song. The bow taking part in a song is described as taking the part of a person in the song, leading the song or following it. The bow performs the *izicabo*, which means that it is singing the texts of the song, faithfully following the speech tones and accents of the texts. But in fact the bow plays melody, and from the melody alone people know which text lines the bow is singing. Therefore the term *izicabo* implies the concept melody. The term *iintlobo* (variations) describes the technique of singing the same text line at different pitch levels, according to whether a singer has a “big” (= deep) or “small” (= high) voice. Because these lines use the same text and a simultaneous rhythm pattern, they move in parallel, because all must follow the same speech-tone pattern. Therefore the term *iintlobo* implies the idea of parallel harmony.

I can only suggest that this type of concrete, phenomenological thinking was common also to traditional Zulu musicians who had not been subjected to western schooling. At the time, centuries ago, when the Southern Nguni peoples moved down into the southeastern corner of Africa, they surely had much in common musically. However, there are some western musicological concepts which are very difficult or impossible to express directly in traditional Xhosa, ideas such as intervals and scale, rhythm, and many others.

⁷ Cf. the booklet *Xhosa Music Terminology in the Dargie Series*; D. Dargie (1996): “African methods of music education”, in *African Music*, 7(3); and: D. Dargie (1998) *Xhosa Music*, Cape Town: David Philip, Chapter 5.

Xhosa and Zulu music

Today there are similarities between Xhosa and Zulu music, but also significant differences. Perhaps the most important similarity is that songs are in call-and-response form and cyclic in structure, but this is true of the indigenous music of all the peoples of southern Africa. Both Xhosa and Zulu music are vocal musics, and are powerfully influenced by the use of musical bows. Neither the Xhosa nor the Zulu traditionally made drums. The percussion drums used by Xhosa and Zulu diviners and Zionist church musicians are bass drum types, developed from the example of the bass drums used by the British military in the 19th century.

One of the most striking differences is in the use of rhythm between the Zulu music such as I recorded around Nongoma and the Thembu Xhosa music I recorded in the Glen Grey district. The Xhosa songs are built on patterns of complex rhythm. In almost every song at least two rhythm systems are moving simultaneously. Patterns of three beats and two beats constantly create cross-rhythm, with use of rhythmic disguise and rhythmic delay making things more complex still. Delay of a rapid pulse between voice and body (dance/clap) rhythm means that in many songs there are two main beats within the rhythm cycle. Amazing cross-rhythms exist: 10 equal beats and 8 equal beats moving within the same cycle, patterns of apparent 5-vs-4 and 12-vs-13 beats; and people often seem to be dancing one song while singing another. I did not find anything like this in my experiences of Zulu rhythm. In contrast, Zulu rhythms were based on a single system of beats – but very powerful, with a driving force not found in that way in Thembu music.

Regarding the use of harmony and polyphony, both the Zulu songs and what I believe are the oldest Thembu songs use parallel harmony, with some (but relatively few) overlapping polyphonic parts. But some Thembu songs have a large number of polyphonic parts. One song which I have recorded and transcribed has at least 40 text lines with different melodies which can all be sung simultaneously if there are sufficient performers; this song has the rhythm of 10 equalised voice beats against 8 equal body rhythm beats.⁸ I am certain that both the rhythmic and polyphonic richness in Thembu music developed through contact and intermarriage with Bushman people long ago.

Technical insights at Maphophoma

Regarding insights into the attitudes of the Zulu bow musicians of Nongoma to music, the only incidents which occurred while I worked with them, and which had implied meanings in terms of stylistic analysis, were the following. When I first went with Brother Clement to Maphophoma, outside Nongoma, in October 1981, I took with me a Xhosa *uhadi* bow. This bow is constructed in the same way as *ugubhu*, and I hoped

⁸ Cf. the CD and booklet *Umzi kaMzwindile, a festival of Xhosa Rhythm (Dargie Series)*; striking performances of Xhosa cross-rhythms may be seen on the DVDs of the *Dargie Series* which feature the music of Ngqoko village and the Ngqoko music group. For example, in the song *Umzi kaMzwindile* at about 0.58.50 ff on the DVD *Performance at the Home of Nofinishi Dywili, 5 November 1998*, two *imirhubhe* bows can be seen using the different beat patterns (10 vs 8 beats) at the same time.

to persuade someone to play it for me as *ugubhu*. Mrs Phumuzile Mpanza – Princess Phumuzile – told us that she had not played *ugubhu* for many, many years, but she at once played three songs for me on my bow. She also briefly sang a song while she played Brother Clement's *umakhweyane*.⁹ When I returned to Maphophoma with Brother Clement in March 1982, we found that Mrs Mpanza had made an *ugubhu* for herself. For this she used a longer, more bendable bow stick than that of my *uhadi*. And she used a smaller hole in the calabash. The result was that her *ugubhu* had a deeper tone than my *uhadi*, with less emphasis on the higher overtones. The bow she constructed showed her preferences for the sound she wanted to produce.

The second insight occurred with *umakhweyane*. When Clement and I returned to Maphophoma in March 1982, Mrs Mpanza introduced us to the sisters Mrs U.E. Zulu and Mrs Z. Nyandu, who had their own *umakhweyane*. Both sisters performed songs with this bow. When Mrs Nyandu was preparing to perform the song *We! Mangwane*, Brother Clement turned to me and said, "Now she is going to play the bow upside down." The significance of this did not strike me at the time, but it meant that she was about to use a different pattern of tonality shift and a different scale. But for Mrs Nyandu ideas of tonality shift and scale were implied, not expressed.

Technical analysis western style

For me as a western musicologist it is relevant to use western tools of musical analysis to help me to understand African music. African musicians can not only identify musical styles of different peoples in their region, they will perhaps even identify the local area of origin of songs of the same population group.¹⁰ The western musicologist can train her/his ear in the same way, but identifying stylistic techniques analytically helps.

Musical bows and musical style

One of the most striking differences between Xhosa and Zulu music is use of the large, unbraced calabash bow called *uhadi* in Xhosa and *ugubhu* in Zulu. Xhosa *uhadi* players use a tonality shift of a whole tone between open and held string, whereas Zulu players of *ugubhu* use a semitone shift. The shift is between, for example, F major and G major (Xhosa), and between E major and F major (Zulu).

The Xhosa *uhadi* pattern gives a hexatonic scale F-G-A-B-C-D, and a constant harmonic shift between F major and G major. This scale and harmony is typical of Xhosa

⁹ These first recordings at Maphophoma on 9 August 1981 are on the *Dargie Series* CD, titled *Zulu Bow Songs III*.

¹⁰ In 1979, at a church music composition workshop which I conducted in Kavango, Namibia, local musicians complained that a certain song composed at the workshop was not in the local style. The composer, also a Kavango, was from a village not far to the west.

music, being used (with some exceptions) in all Xhosa traditional singing.¹¹ This seems to indicate that the *uhadi*, which has been the most important Xhosa musical instrument for hundreds of years,¹² has had a determining influence on Xhosa singing style.

The Zulu *ugubhu* semitone tonality shift gives a hexatonic scale which can be written as E-F-G sharp-A-B-C. When Zulu musicians sing this scale, as in the royal songs called *amahubo*,¹³ it sounds very different from Xhosa singing. It is likely that this scale is very old. It might be the scale used by the original Southern Nguni, who may have brought the *uhadi/ugubhu* with them on their long trek from West Africa, the probable area of origin of all the Bantu-language people. However, another important difference between Zulu music and the musics of present-day surrounding peoples is that the Zulu use several different scales. In what follows I wish to show how the *umakhweyane* has made its own important contribution to this.

Use of the *umakhweyane* type

My travels doing Lumko Mission music work gave me opportunities to work with two Catholic church musicians who composed church songs with the middle-braced calabash bow: Zulu Brother Clement Sithole, already mentioned, and Swati Servite nun Mother Adelia Dlamini, who played a huge Swati *makhoyane*. Musically the Zulu are closer to the Swati (who are also an Nguni people) than to the Xhosa. Mother Adelia's *makhoyane* technique resembled Brother Clement's. I also had the opportunity to record two Tsonga musicians, Mr Peter Chuma and Mr Piet Mabasa, who played the bow called *xitende*. In order to highlight the Zulu uses of *umakhweyane*, I will make a comparison with the *xitende* technique of Mr Peter Chuma as representing the Tsonga, one of the peoples from whom the Zulu apparently inherited this bow.

Playing *umakhweyane*

When the string is struck, overtones of the struck portion of the string are clearly audible from the hole in the calabash resonator. The player holds the opening in the calabash towards the breast, and then either releases or damps the overtones in order to

¹¹ Xhosa tonality shift is normally a whole tone interval between the fundamentals. In the district around Lumko in 1979 and the early 1980s I found that sometimes people added a quarter tone to the interval, making a tonality shift of two and a half semitones, and sometimes other microtonal alterations occurred (D. Dargie 1988:76-78).

¹² J. Campbell, in his *Travels in South Africa* (1815:368) gives a description of the Xhosa *uhadi*. There is reason to believe that the ancestors of the Nguni brought this bow, which still exists in West Africa, with them on their migration from the north. But, it is highly probable that the Xhosas adopted the mouth bows, *umrhubhe* and *umqangi* from their Khoi and Bushman neighbours, as indicated by the guttural fricative *rh* in *umrhubhe* and the click *q* in *umqangi*, consonants which the Xhosa took from the Khoi and the Bushmen.

¹³ The song *Isisiba esimnyama* is a royal *ihubo*. On the CD *Zulu Bow Songs III* it is sung by a group led by Mrs Natalina Mhlongo playing *ugubhu*, in Nongoma in 1982. The same song is on the *Dargie CD Drums and Dances*, performed unaccompanied by a group of women near Vryheid (not far from Nongoma) in 1983. The same, typically Zulu, powerful singing style is used with and without the bow.

follow the melody. The brace does not divide the string equally, so the two sections of string have different fundamental tones. The overtones produced by the two sections of string are therefore different. A third fundamental is obtained by stopping the lower section of string by touching it with a finger of the hand holding the bow. The most audible overtones will be the octave and the fifth of the open sections of string, and the octave of the touched string; but here also the fifth may be used. When the upper section of the string is struck, the player will usually continue to touch the lower section with a finger, in order to damp the vibrations of that section of the string and thus produce overtones as pure as possible from the upper section of the string.

Therefore usual practice, shown in Figure 2, is that the player obtains two overtone melody tones from the longer section of the string, two from the shorter section of the string, and either one or two from the stopped section of string, giving possible scales of five and six tones. The middle finger of the hand holding the bow is raised to touch the lower string (marked by the arrow) to produce the third fundamental tone.

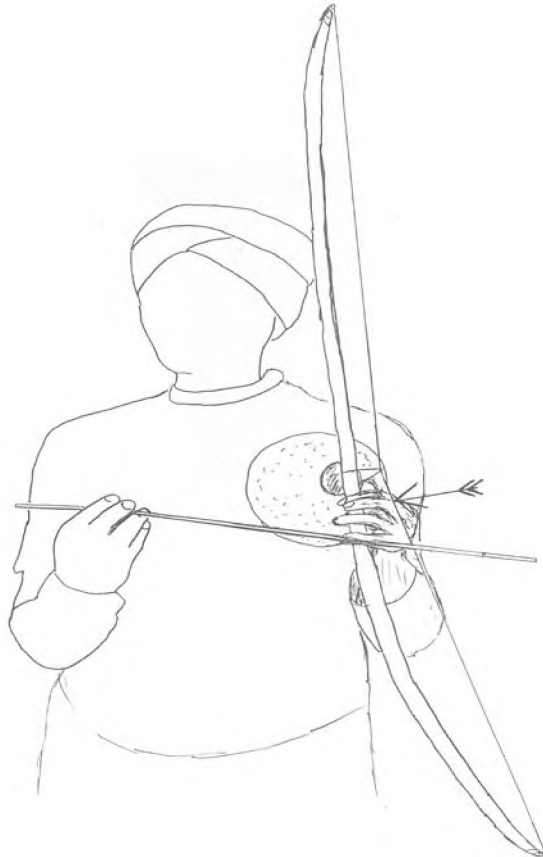


Figure 2. Playing *umakhweyane*.

Example 1 shows what overtones are produced by *ugubhu* and *umakhweyane* (when the two open sections of the *umakhweyane* string are tuned to a whole tone interval), and what chords and scales result from these overtone patterns. The *umakhweyane* intervals and scale in Example 1 are as used by Brother Clement Sithole and Mother Adelia Dlamini.

Example 1. Musical bow overtones

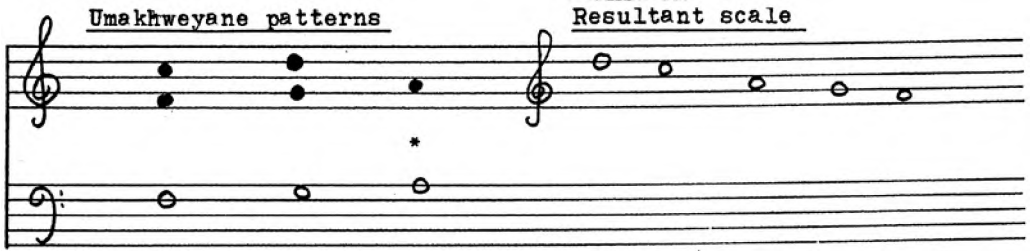
The fundamental tone F produces a pattern of overtones, up to the seventh overtone (eighth harmonic):

The image shows a two-staff musical notation. The top staff is in treble clef and the bottom staff is in bass clef. The fundamental tone F is shown as a whole note in the bass clef. Above it, seven overtones are marked with dots and numbered 1 through 7. The notes are: 1 (F), 2 (C), 3 (G), 4 (D), 5 (A), 6 (E), and 7 (B). The 6th overtone (E) is marked with a plus sign and a flat symbol (+)♭.

The *ugubhu* bow has one, unbraced, open string. It will not normally produce easily audible overtones above the fifth overtone. The player of *ugubhu* will pinch the string to produce a second fundamental a semitone higher than that of the open string. This second fundamental is indicated by an asterisk * in the score below. The fundamentals produce two major chords a semitone apart, written as E major and F major. Combining these two chords, a six tone scale is obtained: E-F-G# A-B-C. Singers may prefer to sing the tone G natural instead of G#, as more convenient in sung passages.

The image shows two musical staves. The top staff is in treble clef and the bottom staff is in bass clef. The first part is labeled 'Ugubhu overtone chords' and shows two chords: E major (E, G#, B) and F major (F, A, C). The second part is labeled 'Ugubhu scale' and shows the notes E, F, G# (marked with a plus sign and a flat symbol (+)♭), A, B, C. The G# note is marked with an asterisk (*).

The *umakhweyane* has two open sections of string. Each section of string is shorter than a typical *ugubhu* string. Therefore the higher overtones are not so prominent. The player will produce another fundamental tone by touching the lower (in position) section of the string (indicated by an asterisk *). If the string is divided into two sections a whole tone apart, say F and G, and the G section is touched to raise the tone by a further whole tone, then the chief overtones, and the (pentatonic) scale deriving from these overtones, are shown in the score.



Brother Clement always used the same system when playing *umakhweyane*. He tuned the two sections of the string to an interval of a whole tone, and held the bow with the shorter (higher in pitch) section of string downwards. He touched the string at another interval of a whole tone up to obtain the third fundamental tone, as in the *umakhweyane* pattern in Example 1. The scale produced when playing in this way was the “classic” pentatonic scale as shown in Example 1. Mr Bangindawo Mpanza also used this method, with the pattern of fundamentals and overtones as in Example 1, when playing *umakhweyane*, as did Mrs Ziphokuhle Nyandu and Mrs Uzulu E. Zulu at Maphophoma, for most of their *umakhweyane* songs.



Figure 3. Mrs Ziphokuhle Nyandu, with *umakhweyane*, Maphophoma (photo by author, 1983).



Figure 4. Mr Bangindawo Mpanza (playing *umakhweyane*), with Brother Clement Sithole, Maphophoma (photo by author, 1983).

A Tsonga method of playing *xitende*

During the 1980s I was able to record the two Tsonga performers on the *xitende*, mentioned above. Mr Peter Chuma I met and recorded for the first time at St Scholastica Mission in the Louis Trichardt district in 1982, and elderly Mr Piet Mabasa I recorded near Malamulele in 1988.¹⁴

Both excellent musicians, both used the same system with the two open-string fundamentals a minor third apart. Mr Mabasa played a giant bow, well over two metres in length. He did not make much use of stopping a section of string with a finger. Perhaps his bow, which had a tone deeper than Mr Chuma's, produced enough clear overtones to support the singing to his satisfaction. Both he and Mr Chuma used the pentatonic scale for singing with the bow. Mr Chuma, however, stopped the shorter section of the string to obtain a further fundamental a whole tone further up (that is, a perfect 4th above the lower fundamental). These fundamentals can be written as A - C - D, giving the (pentatonic) overtone scale C - D - E - G - A. Interestingly, I also observed Mr Chuma sometimes using two fingers to stop the bow string at two places, producing four fundamentals which could be written as A - C - D - E, and thereby further reinforcing the pentatonic scale.

All of Peter Chuma's *xitende* songs used the same system (see Example 4), which is an outline transcription of the chorus of Mr Chuma's song *Ntombi ya mahleva*. The sketch transcription is written at approximately the pitch of the bow. The two open-string fundamentals were (\pm) F and A flat, the stopped fundamental being B flat. The bow rhythm is not shown. However, in this part of the song (the response chorus) there was perfect co-ordination between fundamentals and sung melody, as shown. The lowest line of the transcription shows the bow overtone chords, and the sung scale. The sung tones are derived totally from the bow overtones, and build up the "classic" pentatonic scale as shown.

¹⁴ The bow songs of Messrs Peter Chuma and Piet Mabasa, and also of Mother Adelia Dlamini, are on the *Dargie Series CD Tsonga Xitende, Swati Makhoyane*.

Example 2. *Ntombi ya mahleva*: Mr Peter Chuma, with *xitende*

The back-biting girl does not sleep ... The *xitende* player sings of his hopes of marriage.

The musical notation consists of four staves. The first staff is titled "Bow fundamentals" and shows a bass clef with notes on the F1, G1, A1, B1, and C2 lines. The second staff is titled "Voice melody (chorus)" and shows a treble clef with a melody of eighth and quarter notes, including a slur over the first two measures. The third staff shows a continuation of the voice melody. The fourth staff is titled "Used overtones" and "Bow fundamentals" and shows a treble clef with notes on the F2, G2, A2, B2, and C3 lines, with a bass clef below it showing the corresponding fundamentals. The notes are labeled as "Used overtones" and "Bow fundamentals".

Umqangala

The *umqangala* is a mouth bow played by percussion. It is still found among the Xhosa, where it used to be called *umqangi* (*umqangala* = little *umqangi*). *Umqangala* is made like the Xhosa *umrhubhe*, with a short curved bow and unbraced string. The player beats it with a light reed, following the melody by resonating the overtones with the mouth. The string is touched with the thumb or a finger in order to obtain the higher fundamental.

The Xhosa system of playing bows is always to use the interval of a whole tone between the two (one open and one stopped) fundamentals. This was the system used by the young woman I recorded playing *umqangala* in 1981, except that she omitted the fourth scale degree of the Xhosa scale. This meant she used the "classic" pentatonic scale, and the harmony shift she used was major chord – open fifth, not major chord – major chord, as always found in Xhosa music. It is very likely that *umqangala*, and also the friction mouth-bow *umrhubhe*, represent cultural links between Zulu and Xhosa, or at least between Zulu and Mpondo Xhosa (who live on the eastern side of the Xhosa area, towards the Zulu region). The bow player first sang the song, and then rendered it on the bow. As is often the case in playing mouth-bows, the bow overtone melody is

a parallel version of the sung melody, at pitch levels suited to the bow overtones. Once again the pentatonic scale is derived from bow overtone patterns, but using a different method from the Tsonga.

Example 3 shows the voice melody, the bow's parallel melody, the overtone tonality shift, and the scale used by both bow and voice.

Example 3. *We! Mkhize*, song with *umqangala*
 Hey! Mkhize.... little girl, it is the name of a ghost.

The musical notation for Example 3 is organized into three main sections:

- Voice melody:** A single staff in 4/4 time showing a melodic line with eighth and quarter notes.
- Bow melody outline:** A staff showing a series of notes corresponding to the voice melody, with some notes grouped in parentheses to indicate specific bowing techniques or overtone patterns.
- Bow fundamentals:** A staff showing the fundamental pitches of the bow, with a note labeled "(actual pitch ± E flat - F.)".
- Tonality shift. Scale.:** Two staves showing a tonality shift (represented by a key signature change) and a pentatonic scale.

Ugubhu

Example 4 draws material from a song I recorded at Maphophoma, performed by Princess Phumuzile Mpanza. The pattern of bow fundamentals and the voice patterns are shown more or less at actual pitch. The tonality shift is transposed to the semitone E-F tonality shift position, and the scale is then also given in the transposed (E-F) position. Rycroft (1975/6) points out that the tone G natural is occasionally added to the scale by singers, presumably for ease in passage singing, although it is not derived from bow overtones. Mrs Mpanza did not use it in the excerpt quoted, so I have put this tone in brackets.

Example 4: *Abantu baphelile*: Princess Phumuzile Mpanza, with *ugubhu*

The people were destroyed... The song tells of people killed by the whites long ago. It is an ancient freedom/protest song.

Bow fundamentals (approximate pitch)

Voice 1 (Humming)

Voice 2

Tonality shift Tonality shift and scale transposed to E-F position


Umakhweyane in the “right side up” position: the usual method

In Examples 5 and 6, the songs *Wangibiza ngavuma* and *Ikhala phi inyoni*, Mrs Ziphokuhle Nyandu, with *umakhweyane*, used two open-string fundamentals a whole tone apart, with the stopped fundamental a further whole tone up. For both songs the actual pitch of the fundamentals was \pm C-D-E, although I transposed Example 5 to the F-G-A position. In Example 5, the player clearly treated the stopped fundamental (A) as consonant with and reinforcing the overtones of the lower open fundamental (F), so that the F major triad is completed. This is indicated by showing the harmony shift as F major triad - G open fifth. Perhaps this was influenced by the rapid, light rhythm of the bow part, which helped to blend the tones into the chord.


Example 5. *Wangibiza ngavuma*, Mrs Z. Nyandu, with *umakhweyane*

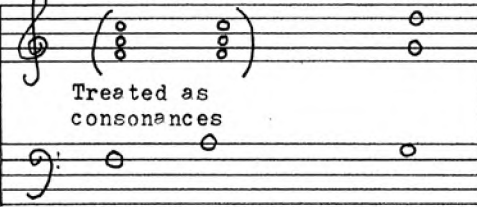
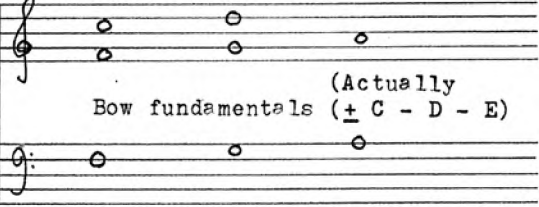
You called me, I answered.... This is another freedom/protest song, though more recent than the previous example. It tells how people were killed, and the police did nothing to stop it.

Voice melody

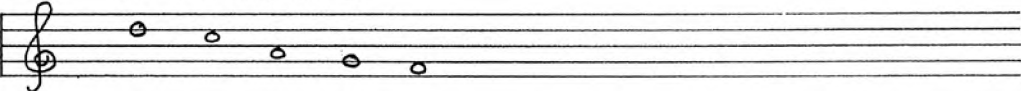


Bow pattern (with much variation)



<p>Tonality shift</p>  <p>Treated as consonances</p>	<p>Derived overtones</p>  <p>(Actually Bow fundamentals (+ C - D - E)</p>
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(Pentatonic) Scale



In Example 6 there is somewhat closer co-ordination between bow fundamental and sung tone, but here also the stopped fundamental is clearly treated as creating a major triad with the lower open fundamental. These consonances are indicated in the last line of Example 6, which relates the tone E to the fundamental C and its overtone open fifth C-G, and the open fifth C-G to the fundamental E.

In both Example 5 and Example 6 the pentatonic scale is sung, and is derived from the bow overtones in the same way. This is also the method used by Brother Clement in his *umakhweyane* compositions. Mother Adelia uses the same method in her Swati *makhoyane* compositions as well.

Example 6. *Ikhala phi inyoni?*, Mrs Z. Nyandu, with *umakhweyane*
Where does the bird sing? asks the singer.

The image displays four staves of musical notation. The first staff, titled "Bow fundamentals (+ actual pitch)", is in bass clef with a 2/2 time signature and shows a sequence of notes with stems pointing down. The second staff, "Voice pattern I", is in treble clef and shows a melodic line with stems pointing up. The third staff, "Voice pattern II", is also in treble clef and shows a similar melodic line. The fourth staff, titled "Bow fundamentals & overtones (& consonances) (Pentatonic) Scale", is in treble clef and shows a pentatonic scale with notes G, A, C, D, E. A dotted line connects the C note in this scale to the C note in the third staff.

Umakhweyane “right side up” position: an unusual method

Example 7 shows an outline of the song *Uyadelela omfazi onyundayo*, as played by Mrs Uzulu E. Zulu, the sister of Mrs Nyandu. Mrs Zulu played only two *umakhweyane* songs for me, one of which used the same system as in Examples 5 and 6. In *Uyadelela* she also used open fundamentals a whole tone apart (written at approximate pitch as G and A), but the stopped fundamental was a minor third above the higher open fundamental, and is written here as C. In this way Mrs Zulu also derived the “classic” pentatonic scale, but in a different position from the more usual method. The usual method would have produced the scale as G-A-B-D-E, but Mrs Zulu now produces the scale G-A-C-D-E, or C-D-E-G-A.

There are therefore at least three Zulu ways of deriving the pentatonic scale by bow overtones: using *umqangala* as in Example 3; using *umakhweyane* with the “usual method” in Examples 5 and 6, and using *umakhweyane* with a less usual method in Example 7:

Example 7. *Uyadelela omfazi onyundawo*, Mrs U.E. Zulu, with *umakhweyane*
 The second wife of a man is a trouble-maker. She tries to get rid of the first wife...

The musical score for Example 7 consists of four staves. The first staff, labeled 'Bow fundamentals', shows a sequence of notes on a bass clef staff. The second staff, labeled 'Voice', shows a melody on a treble clef staff with triplets and other rhythmic markings. The third staff, labeled 'Bow rhythm ... etc ...', shows a rhythmic pattern on a bass clef staff with triplets. The fourth staff, labeled 'Fundamentals & overtones (Pentatonic) Scale', shows two systems of notes on treble and bass clef staves, with a note marked with a plus sign and the text 'Actual pitch' below it.

***Umakhweyane* played “upside down”**

Examples 8 and 9 both show songs with *umakhweyane* held “upside down”. Mrs Nyandu, before playing *We Mangwane!*, tuned the bow to open fundamentals a minor third apart shown in Example 8 as E and G, and then she inverted the bow so that the longer section of string (with fundamental E) was down, and could be touched by her while playing. The stopped fundamental was then F between the open fundamentals, a semitone above E.

This at once calls to mind the semitone tonality shift of *ugubhu*. However, the resultant scale is significantly different. Mrs Nyandu and the answering singers used the scale tones as shown in the last line of the transcription: E-F-G-B-C-D when written ascending. These are the overtones (octave and fifth) of the three fundamentals. There is some use of non-harmonic tones by the voices, but the sung tones are clearly the same as the bow overtones, related by octaves and fifths to the fundamentals. This is therefore a different Zulu hexatonic scale, with its own patterns of sound.

Example 8. *We Mangwane!*, Mrs Z. Nyandu, with *umakhweyane*
 Hey, Mangwane people! Give us spears ...

Bow fundamentals (actual pitch + Major 3rd down)

Voice (song leader)

Voice (song follower)

Fundamentals & overtones

Scale

Example 9, *Mubi umuntu*, is the only song sung with *umakhweyane* by Mrs Mpanza. She used the same system of fundamentals and playing method as Mrs Nyandu in *We Mangwane!* Her scale is the same as Mrs Nyandu's, except that, in the short snatches she sang, she did not sing the tone written as D, the fifth above the stopped fundamental. Whether she might also use D in other similar songs, or whether she avoided D because of her preference for the *ugubhu* scale, we cannot know. But the tone G, which she plays clearly, is not an *ugubhu* tone.

Example 9. *Mubi umuntu*, Princess Phumuzile Mpanza, with *umakhweyane*

This person is bad... an evil and jealous woman. One cannot even go to her for help.

Bow fundamentals



Voice pattern



Fundamentals & overtones **Scale**



Actual pitch + major 3rd up.

Conclusion

Ugubhu is clearly considered the most important Zulu musical bow. It is an ancient instrument, the songs sung with it are among the most important Zulu songs, including the royal songs called *amahubo*. But the importance of one instrument is not a reason for neglecting another. Zulu musicians clearly made *umakhweyane* their own. Exactly when it was adopted by the Zulu is not known. Princess Magogo knew via common knowledge that it was not originally a Zulu instrument. Traditions go back over years, so maybe *umakhweyane* dates back at least a hundred years before her lifetime among Zulu musicians. The link-up between the people of Shangana, fleeing from Shaka, and the Tsonga coming in from the north-east was in the first half of the 19th century. Maybe this gives an indication of a time of musical contact between the two peoples, just as the present South African Tsonga absorbed much linguistically from their Nguni contact.

The Zulu have definitely had *umakhweyane* long enough to make it their own. Rycroft speculates that it was the convenience of playing *umakhweyane* that led musicians to choose it over *ugubhu*. There is also another consideration. *Umakhweyane* is generally a louder instrument than *ugubhu*. This makes it perhaps more successful for entertaining people. Yet, with many musicians *umakhweyane* had to give way to for the guitar, as shown by the emergence of the *maskanda* guitar players and their music. Perhaps it is significant that among the earlier (and more Zulu influenced) songs of the well-know popular music group *Juluka*, there are songs using typical *umakhweyane* tonality shift

scale and harmony, for example, the chorus of the song *Heart of the Dancer*, on the CD *African Litany*.

Mr Mpanza, who played both *ugubhu* and *umakhweyane* for me, had, like his wife Princess Phumuzile, not played the bows for many years. I was told a family member had broken the old man's bow, because the bow interfered with the radio. When a colleague and I first went looking for *uhadi* among the Xhosa around Lumko in 1979, one woman told us that she no longer had to play *uhadi*, because "sino-FM" – "we have the radio". One can only feel most grateful for the musicians who try to keep the instruments of the past still sounding, like Brother Clement and his *umakhweyane*.

Umkhweyane has made its contribution to Zulu music. It may be that the pentatonic scale, so different from the *igubhu* scale also came to the Zulu from the surrounding peoples, those to the north, the Sotho to the west, the Khoi and the Bushmen from all around. *Umkhweyane* and *umqangala* could perform music using this scale, deriving the overtones in different ways. Furthermore, as shown in Examples 8 and 9, *Umkhweyane* also contributed at least one unique hexatonic scale to Zulu music. This did not diminish, but rather adds to the collective beauty of the music of the Zulu people.

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Recordings of the songs

The *Dargie Series* is (up to April 2007) a collection of 40 CDs and eight DVDs with 18 accompanying booklets, containing recordings made by the author from 1977 to the present. This collection is kept in a number of libraries and university departments in South Africa (including the International Library of African Music (ILAM), the University of Fort Hare library, Rhodes University Music Library, among others), and also in certain libraries in Europe. Copies of recordings may be obtained from the author and from ILAM. The recordings discussed in this article are found on the CDs *Zulu Bow Songs, I, II & III* (three CDs with booklet), *Tsonga Xitende*, *Swati Makhoyane* (CD with insert booklet), and also on *Magical Musical Bows* (CD with booklet).

The following music examples pertinent to this article can be obtained on CD from ILAM:

<u>Track(s)</u>	<u>Item(s)</u>
1	Demonstration of bow overtones and scale on <i>umqangi</i> (D. Dargie)
2, 3 & 4	Demonstrations of bow overtones and scale on <i>uhadi</i> (D. Dargie)
5	<i>Ntombi ya mahleva</i> by Mr Peter Chuma (<i>xitende</i>) and group
6 & 7	<i>We!Mkhize</i> by a young woman at Maphophoma, 1981; first singing, then with <i>umqangala</i>
8	<i>Abantu baphelile</i> : Princess Phumuzile Mpanza with <i>ugubhu</i>
9	<i>Wangibiza ngavuma</i> : Mrs Z. Nyandu plays <i>umakhweyane</i> , her sister Mrs U.E. Zulu sings with her
10	<i>Ikhala phi inyoni?</i> Mrs Z. Nyandu plays <i>umakhweyane</i> , Mrs Zulu sings with her
11	<i>Uyadelela omfazi onyundayo</i> ; Mrs U.E. Zulu with <i>umakhweyane</i>
12	<i>WeMangwane!</i> Mrs Z. Nyandu, <i>umakhweyane</i> , with group (including Brother Clement)
13	<i>Mubi umuntu</i> ; Princess Phumuzile Mpanza with <i>umakhweyane</i>

All recordings are from CDs of the *Dargie Series*. Tracks 1, 2, 3 & 4 are from *Make and play your own musical bow*; Track 5 is from *Tsonga Xitende, Swati Makhoyane*; Tracks 6, 7, 8, 9, 10, 11 & 12 are from *Zulu Bow Songs I*; Track 13 is from *Zulu Bow Songs III*.