

# TRANSCRIBING THE VENDA *TSHIKONA* REEDPIPE DANCE

by

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Figure 1. Mr. T.V. Netshivhale rehearsing the Sundani Primary School *Tshikona* Group, Limpopo Province. Photo by Laina Gumboreshumba.



Figure 2. *Luimbo lwa tshikona*: the *tshikona* song. The encircled form number 12 indicates the *tshikona* song has a 12 pulse cycle. This is a transcription of the seven *nanga* reedpipe parts and of the time-keeper *thungwa*, one of the three drums played in performance of *tshikona*. *Thungwa* beats are shown by the heavier pulse lines. The average tempo of *thungwa* is 90MM. The large numbers and white notes show the starting pipe scale. The small numbers and black notes show the secondary pipe scale which is played on the same pipes and sounds simultaneously with the first. I have chosen to write Pipe 1 as a top line F in this '*Tshikona*' clef, using the note names of treble clef.

## Introduction

Starting with the end result, the above transcription is the conclusion I came to after sitting with Laina Gumboreshumba for many hours, watching the videos she made during her recent doctoral research on the *tshikona* reedpipe dance of the Venda of Limpopo Province in the extreme north of South Africa.<sup>1</sup> The transcription shown in Figure 2 is a skeleton version of the full pipe sound that contains all the information needed to grasp the structure of the sound and teach it or play it. There are always seven different pipes. A full *tshikona* group has far more than the seven pipes (*nanga*) shown, because all seven pipe numbers are doubled in every octave present in a group, so there may be up to four or more Pipe 1s, Pipe 2s, etc., of different sizes. All the Pipe 1s play the same pattern together, all the Pipe 2s etc. There are usually four octaves in all, with an incomplete octave of a few higher pitched pipes at the top (*phalana*). A popular size for a group according to group leaders (*malogwane*) is twenty eight pipes, which may include some pitch duplicates. A festive performance can number well over one hundred players. The music is heptatonic as you can see from the transcription, and hear for yourself from CD track 1 accompanying this issue of *African Music*. A chart showing the tuning is included as Figure 11 at the end of this article. This article does not address the pipe names; they are simply numbered Pipes 1 to 7, in the order of entry in Mr Netshivhale's groups.<sup>2</sup> The pipes are end-blown, closed tubes made of a special bamboo, or increasingly today of electrical or other tubing.<sup>3</sup> (See Figure 3)



Figure 3. A *mutavha* (complete set) of *nanga* (pipes) of Khakhu Tondoni *tshikona* group, showing four octave groups of seven pipes each, and six high *phalana* pipes. Photo by Laina Gumboreshumba.

<sup>1</sup> Writing of the dissertation is in process. This article was written by Andrew Tracey and worked out in discussion with Laina Gumboreshumba over her videos from her field research.

<sup>2</sup> Mr. Tshotheli Netshivhale, *tshikona* instructor who teaches many groups in schools, communities and at the University of Venda, and Laina's main informant and teacher.

<sup>3</sup> Full descriptions of all aspects of the pipes, the dance and its steps and practice, are included in Laina's doctoral thesis in ethnomusicology under preparation for Rhodes University.

One motivation for Laina's research was that John Blacking's (1967) ground-breaking Venda research, which included the only description up to now of the structure of *tshikona*, was short on the precise details of how *tshikona* is performed, particularly on its rhythm. In spite of this he was able to show that much other Venda music draws its shape from the sound of *tshikona*. I offer this transcription as a complement to his work, and to that of all others who have been impressed with this dignified, difficult Venda dance but have not tackled the structure of its big, multi-dimensional musical sound. Laina and I are confident that the present transcription is reliable and can be used for learning *tshikona* in the absence of an experienced teacher. I hope that it will be used in South Africa to spread knowledge of the dance, reduce the bewilderment that non-Venda may experience and show them how it is built up, not surprisingly, on recognisable and repeatable African principles.

### The five-line stave

I choose to use a five-line stave for transcribing the pitches of the pipes. Understand however that the written notes do not refer to the conventional Western pitches, but mean the sounds actually given by a tuned set (*mutavha*) of Venda reedpipes. The fact that Venda music is heptatonic while the five-line stave is also designed for a heptatonic system makes for a good fit. There are certain advantages to the use of the 5-line system for those familiar with staff notation, such as: the condensed, graphic image of pitch movement; the visible relationships between notes, intervals and harmonies; its immediate familiarity to the staff-trained reader; its wide comparability with all other music written in this way. Disadvantages could include: ideological objections to the use of a non-African-derived system; the fact that *tshikona* players themselves have no use for such a written system; and the belief that the notes as written on a 5-line stave *must* be read as the standard Western notes. As said above, this does not have to be the case. We are as free to define the sound of all notes on the lines and spaces of the stave as a mathematician is to define the axes of a graph. Although we may use the note names of the treble clef; this is not treble clef, it is 'Tshikona Clef'.

As regards the overall pitch level, whatever it was in the past, *tshikona* groups today do not seem to have a uniform fixed pitch.<sup>4</sup> The frequency of Pipe 1 varies in our measurements from 416 to 260 Hz (see the tuning table, p. 39). Discarding three of the extreme figures, five of the eight Pipe 1 measurements cluster from 288 to 260 Hz, showing a significant preference for this tuning region, which is only 177 Cents wide, less than a whole-tone. The musical pattern played by all *tshikona* groups is very close to identical,<sup>5</sup> although sounding at different pitch levels as explained. Therefore there is no point in trying to find the closest Western note to start writing from; we can use whatever note we find most convenient. But reasons for choosing a good *written* pitch level are a need for: 1) approximate correspondence with Western pitch as a general

<sup>4</sup> A.M.Jones 1980.

<sup>5</sup> Whether any differences are significant remains to be seen; they could also be put down to style, tuning, tempo, individuals, local history etc.

principle, although the variability of the pitch levels quoted above means that this is not useful for *tshikona*; 2) a good fit inside the staff. For practical music writing we want to avoid a pitch level which needs the use of many ledger lines; 3) historical continuity with the pitch chosen by previous writers.

Only one researcher, Blacking, has previously transcribed *tshikona*.<sup>6</sup> He used three different Western pitches for the pipe called *Phala*: G, A and B flat; influenced, no doubt, by his subjective impression of the scale as similar to one or more of the Western modes. Further, it is not clear from his writing whether his *Phala* means our Pipe 1 or 2, a problem arising from 1) the far from unanimous pipe naming among various *tshikona* groups, 2) his perception of the rhythm, and 3) his equating the Venda scale with the nearest Western mode that it suggested to his ear. It is difficult, probably impossible for someone educated in music through the Tonic Solfa or indeed any scale, to put it completely aside when observing a new, unfamiliar scale. This is as true for me as for any outside researcher.

The scales of other *tshikona* groups tend to bring to mind other Western modes. But one can see from the tunings in Figure 11, in particular the cents intervals between pipes, that none of the scales actually show the typical Western modal patterns of whole-tones and semi-tones. It is only our training and experience that makes our ears think so. The Sundani group, for instance, is interesting, because five of its seven intervals show a preference for intervals around 171.4, the mean cents figure for an equi-interval heptatonic scale, giving evidence for the position of the Venda within the large region of southern Africa centered on the Zambezi River valley including eastern Zimbabwe, central and parts of southern Mozambique, and southern Malawi, where similar scales are prevalent. Some Venda *malogwane* such as Netshivhale and Netshiya, when describing to a visitor how the pipes work, may refer to pipes 1 to 7 as do ti la so fa mi re because of their knowledge of Tonic Solfa (always going downwards from the top note like this), but these names are not used in the normal course of learning and performing *tshikona*.

### Numbering of the pipes

The music shows the pipe numbering in the order in which Netshivhale's and the majority of groups start playing. When starting, Pipe 1 plays on pulse 11, then the others come in as soon as possible, rapidly sorting themselves out in not more than one cycle. Each pipe plays twice in the cycle, hence each number appears twice. Note that Pipe 1's first note falls BEFORE the first *thungwa* beat and thus is written near the end of the cycle. It is Pipe 2 that falls on the 'first' *thungwa* drum beat. The unchanging

<sup>6</sup> Kirby's full transcription (1934) of the sound of a set of Venda reedpipes and three drums cannot positively be identified as *tshikona*. He describes it as '*mathangwa*', the name of another dance; it is written in duple (2/4) time, which cannot be correct for *tshikona*; and the pipe parts appear to be the source of Blacking's impressionistic *tshikona* rhythm. Kirby writes only one part, '*murumbu*' (sic) in triplets over the 2/4 time; it bears a resemblance to *murumba* in my transcription, provided his second crotchet beat in Bar 1 is taken as my *thungwa* 1.

3-pulse *thungwa* beat is shown in the music by the heavier vertical pulse line. A point we had to decide on was which *thungwa* beat to call 'first', or '*thungwa* 1', and write on paper as pulse 1, as this is not verbalised as such by the musicians. The music is cyclical, after all; the most important thing to ensure is that all the parts be written in the correct relationship. Any *thungwa* beat could strictly be called 'first' for the sake of argument. Not to labour the point, there are three reasons for choosing to place pulse 1 as we have done: 1) In most groups Pipe 2 falls on *thungwa* 1, but there are a few groups such as Vhutavhatsindi and Khakhu whose pipes only start playing two pulses later, i.e. on *thungwa* 1. (Strictly, our Pipe 2 would have to be numbered 1 for them.) We need a common standard for referring to each pipe and its pulse position, so we chose to use Netshivhale's method. 2) Pulse 1 is the starting point for the timeline pattern which underlies both *tshikona* and much other music of the Venda (see Figure 6) and their neighbours, notably the whole Shona and Sena language groups to the north. 3) Many dance steps start on *thungwa* 1 or *thungwa* 3 (pulse 7), a half cycle from pulse 1.

As apparent in the music, two pipes always sound together. See for example pulse 1, where Pipe 2 plays together with Pipe 6, followed on pulse 2 by Pipes 3 and 7 together, and so on. Each time any pipe plays, it is joined by one of two other pipes in turn, as Blacking observed correctly. So the next time Pipe 2 plays it is joined by Pipe 5 (on pulse 7). The same applies to all seven pipes.

The melody lines of the pipe sound can be conceived as consisting of two endlessly renewing, parallel descending lines stepping down the seven notes of the scale, as was discussed by Blacking. They are written here, one in white, one in black notes, to make them easy to distinguish. The colour has no rhythmic significance, and neither scale is predominant. I have written the starting scale with white notes, and numbered the pipes in large numbers accordingly; the scale written in black notes with small numbers provides the other note of the two-note *tshikona* harmonic system. The scales sound a fourth and a fifth apart in the Venda tone system, which would be easier to see on paper if I had written out in entirety *all* the doubled pitches of all the octaves that are sounded in performance by a full group. Remember that the transcription only shows the pitches inside one octave, which is all that is necessary for learning. In both theory and in practice the two completed scales are fully present, going down through all the four plus octaves, but it is very hard to hear them as such when you witness *tshikona*. What your ear does, as a listener, is to group together 'inherent patterns' of notes in selected pitch regions, following the principle first elucidated by Gerhard Kubik (1962). This effect is reinforced because the person on the spot hears pipes that are closer to him louder than others which are further away.

That the Venda do in fact perceive *tshikona* in inherent patterns is affirmed by Blacking in his writings on Venda music and by the many songs given in his book *Venda Children's Songs* (1967) which borrow the typical melodic patterns as they are actually heard in *tshikona*. The same effect can be heard to some extent when players of the Venda *mbila dza madeza* lamellophone play their instrumental version of the sound of *tshikona* as they hear it.

The three examples in Figure 4 make the first descending scale clear, that in which Pipe 1 starts at pulse 11. The second scale is mostly missing; example 1) has three of its notes, 2) only two and 3) none. These players' repertoire consisted mainly of songs in the older *mbira* style brought from the Shona; note that the few harmonies they do include in their versions of *tshikona* reflect more the players' preference for Shona-style chord movement, than the parallel harmonic style of *tshikona*, which is strictly avoided in Shona music. The *mbila dza madeza* versions tend to concur on pulses 11 to 7, and differ on the second, 'hazy', faster part, pulses 7 to 10. (This hints at my analysis of *tshikona* rhythm below.)

Figure 4. “*Tshikona*” on *mbila dza madeza*<sup>7</sup> played by 1) Phineas Nemavhulani at Phindula, 2) James Munyai at Tshaulu, 3) Albert Kambuza at Gaba, all transposed to the pitch used in this article for the sake of comparison. The R and L hand staves are written one octave apart. The small notes are variations.

### The rhythm of the pipes

The *tshikona* song gives the sense that all the pipes are sharing in the duty of playing just one rhythmic pattern in unison. This rhythmic approach differs from all but one of the other southern African one-note pipe or horn dances, namely the Nyungwe *nyanga*, the Shona/Zezuru *ngororombe*, the Pedi *dinaka*, the Chopi *chimveka* and the Valley Tonga *ngoma buntibe*, where the parts are more rhythmically independent and cross each other continually.<sup>8</sup> The exception is the Tswana *ditlhaka*, whose rhythm and steps appear to be in marked unison, something like but less polyphonic than *tshikona*.

<sup>7</sup> The tuning plan is very close to that of *mbira dza vadzimu* of the Shona/Zezuru. See Tracey 1972, Berliner 1978 etc.

<sup>8</sup> A. Tracey 1971, 1992; Ballantine 1965; Gumboreshumba 2004, 2006; H. Tracey 1960, Kunzwana 2011.

	1	2	3	4	5	6	7	8	9	10	11	12		pulses
	●	•	●	•	●	•	●	●	•	●	•	●	•	
	2		3		4		5	6		7		1		pipes
	6		7		1		2	3		4		5		pipes

Figure 5. The unison rhythm pattern of the *tshikona* pipes. The twelve pulses along the top are the equidistant small units of time which underlie *tshikona*. Note that Pipes 7 and 4 play between pulses 9 and 10.

To avoid clutter I use only one number when referring to a particular Pipe, but in point of fact there are always *two* pipes sounding at the same time, as already stated. If for example I refer to Pipe 1 when it plays at pulse 11, it is understood that Pipe 5 will also sound. (And remember that all the octaves of Pipes 1 and 5 present in the group will also be sounding.)

A simple, non-technical way of describing the pipe rhythm would be to say that the whole pipe song consists of four slow notes (on Pipes 1, 2, 3, 4), followed by three faster notes (Pipes 5, 6, 7), leading back to the beginning. This insight is enough for a listener to form an initial orientation to the dance. But it is not accurate, which made me consider several solutions to perceiving the rhythm before arriving at one I believe is more correct.

Now, to deconstruct the rhythm of the *tshikona* pipes . . . Two root ideas of Venda music that presumably have always applied are a) that it should use seven different notes in each octave, i.e. be heptatonic and b) that the metric framework of dance should be a 12-pulse cycle. Given this, the seven pipe notes need to be fitted into twelve pulses, so all of them can have a part to play. This does not divide up equally! How to do it? The solution found in *tshikona* appears to be a combination of three fundamental African principles and one piece of history: **1) the 12-pulse timeline, 2) regular movement wherever possible, often set against the regular movement of another part moving at a different speed; 3) division of available segments of time into equal parts.**<sup>9</sup> The piece of history to be elaborated is that *tshikona* seems to share one fundamental stylistic feature with the *ditlhaka* reedpipe dance of the neighbouring Sotho/Tswana/Lete.

### The 12-pulse timeline

Prominent in the sound of *tshikona*, and most clearly audible in the steps and the drums, is a rhythm pattern which is found widespread across sub-Saharan Africa from West Africa to South Africa. It is usually described as a 'timeline pattern', meaning that it can be used as a constant pattern with which all the parts of an ensemble are timed or coordinated. In a common form in southern Africa it looks like this:



Figure 6. Twelve-pulse timeline pattern as used in parts of southern Africa.

<sup>9</sup> Cf. Dave Dargie's discussion of equalised beats in his article in this issue of African Music.

Like the Latin-American ‘clave’ timeline, it can be played in a 3-2 (as above) or a 2-3 version. Timeline patterns are characterised by a first section which gives a particular movement or rhythmic expectation, pulses 1, 3 and 5 here, then a change to a second section, pulses 8 and 10, which is ‘offbeat’ to the first, then a similar change to return to the start. Most timelines are built on cycles of 12 or 16 pulses (smallest rhythmic units). Their construction is founded on deeply African musical/mathematical design principles.<sup>10</sup>

All three components of *tshikona*, the pipes, drums and dance, however complex and variable they may sound in performance, are linked by constant adherence to this pattern. I have seen *tshikona* frequently, but this revelation only came to me after many concentrated hours of watching Laina Gumboreshumba’s videos. Suddenly the unity of the three components of the dance became clear. *Tshikona* rhythm is based on this great Africa-wide timeline pattern! This should hardly have surprised me, really. It now extends the southern boundary of this 12-pulse timeline into South Africa. It is little used even by the other drum-ensemble playing cultures of the country, the Pedi and Shangana-Tsonga, and elsewhere in South Africa not at all. (I should qualify this, however, by noting that since 1994 and the ensuing contact between South African and other African musicians the use of 12-pulse cycles and timelines has blossomed in popular music.)

The pattern is clearest in the two drums *murumba* and *ngoma* and the dance steps:

#### *Thungwa*

| | ● • • ● • • ● • • ● • • | |

#### *Murumba*

| | • (●) • • ● ● • • • ● • • (●) | |

#### *Ngoma*

| | ● • • • • • • ● • • • • • | |

| | ● • ● • • ● • • ● • ● ● • • | |

| | ● • ● ● ● • ● ● • ● • • • • | |

#### An opening step

| | **B** • **R** • **L** • **R** **L** • **B** • • | |

Figure 7. Basic, pared-down rhythms of the three drums, showing important beats. *Thungwa* does not vary at all; *murumba* can do so. *Ngoma* does not usually omit the beats in line 3; lines 4 and 5 give an idea of possible *ngoma* variations. Line 6 shows an energetic ‘opening’ step that the pipers may dance immediately as they start to play. **B** is a jump onto both feet, **R** and **L** a jump onto right or left foot.

*Ngoma*, a large, deep, closed, single-skin, stick-played, vessel-shaped drum, shows the timeline pattern most dependably, usually marking, significantly, the two beats which start each section of the pattern, pulses 1 and 8. Sometimes it may play all five beats of the timeline. Pulse 8, at least, can hardly be omitted, even when the

<sup>10</sup> Cf. Kubik 1971, 2008.



drummer is relaxing the pressure. *Thungwa* is a middle-pitched drum similar to but a little smaller than *ngoma*. Its function is quite different, marking a regular 3-pulse time-keeping beat. *Murumba*, a higher pitched, conical, hand-played drum, acts as a filler and adds character. Note pulses 5 & 6, which are otherwise rather empty in the ensemble, and that these two pulses are the same two commonly used in versions of the timeline to introduce its ‘off-beat’ second section. One of *murumba*’s beats stands out as noteworthy, the one on pulse 9½. It is discussed in the next paragraphs.

The unison rhythm of the pipes is not quite as straightforward as the drum rhythms, as witness the difficulty that Blacking had in perceiving it. If we start from the beginning of the line at *thungwa* 1, the pipes start off according to the timeline, with three two-pulse beats on pulses 1 3 5, played on Pipes 2, 3, 4. So far so good. From this point to the end of the allotted 12 pulses of the cycle there are still four more pipes to fit in, so that all seven pipes can have a part. How do you fit four beats into six pulses? Before considering the answer I must clarify that I find it harder to formulate the exact rhythm of the second half of the *tshikona* song than the first half. This is most ‘hazy’ when the pipes play alone without drum accompaniment, as can happen during a performance or commonly at a lesson. I believe that the pipe players play less precisely when there are no drums, and tend to fall unconsciously into one of the above three principles, 1, 2 or 3.

The answer to the problem of fitting four pipes into six pulses – or seven pipes into all twelve pulses – in other southern African traditions (including the Venda) would offer little difficulty. There could be several solutions, for instance A) Once you have already chosen to start with a timeline on pulses 1, 3 and 5 you could follow that with four equal beats of 1½ pulses each (on 7 8½ 10 11½) on the basis of **Principles 2** and **3**. I considered this possibility. I can sometimes hear it this way but cannot sustain it for long while listening, because Pipes 6 and 1 always seem to play fractionally *before* these pulses. B) Another answer (**Principle 1**) could be the pattern frequently used for the second half of the timeline in many African drum, lamellophone, xylophone, clapping, etc. styles, including those of the Venda; that is to play two double strokes, on pulses 7 - 8 and 10 - 11. *Tshikona* can sometimes sound like this, but again there is a problem: Pipe 7 always seems to play just *before* pulse 10. Of course there are other possibilities.

Trying to apply such rhythmic formulae from Venda and other traditions always leads to hearing slight but consistent discrepancies, which made me look for a better answer. The clue comes from the *murumba* part. All its beats fall precisely on one of the twelve pulses, *except for one* that consistently falls on a half pulse (9½). Why this particular spot? It is the only drum that does this. It is clear from video footage of extended learning sessions with Netshivhale’s group, and also from many other groups. Mr Netshivhale has a mnemonic phrase for the basic *murumba* part: “pambaru paru”.

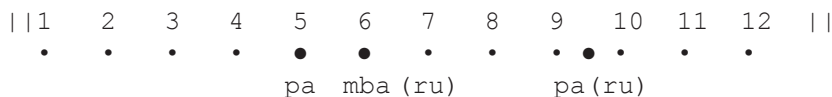


Figure 8. A basic *murumba* beat. The ‘ru’ is not played. It is only spoken to show where the *thungwa* beat is.

We can now assemble the beats of the second half of the pipe song, pulses 7 to 12, looking at each pulse in turn, and comparing with Figures 2 or 5. Pulse 7 (Pipe 5), although it does not feature in this version of the timeline, can easily appear in other versions. If this pulse were bypassed, or not played, the difficult task would then remain of fitting four pipes into only five pulses. Pulse 8 (Pipe 6) is essential as it is the important first beat of the second section of the timeline, and is always reinforced by *ngoma*. Laina's comprehensive dance transcriptions show that pulse 8 is almost never omitted in dance steps, nor in *ngoma*, but is stressed. (When playing without the drums, Pipe 6 may blow a fraction later, equalising the space between Pipes 5 and 7.)

Jumping ahead to Pipe 1, shown on pulse 11, this is spaced according to **Principle 2**, regularity of movement, so that Pipe 1 will form part of the regular series of four 2-pulse Pipe notes which follow on pulses 11, 1, 3, 5.



Figure 9. Regular spacing of four of the *tshikona* pipes reminiscent of the Tswana/Lete *ditlhaka* reedpipes.

Notice that these five pipes apparently play in the manner of the Tswana/Lete *ditlhaka* pipes (see below). Now only Pipe 7 is left to fit in. Where to put it? The answer in *tshikona* is for Pipe 7 to play so its position equally divides the available space between Pipe 6 (on pulse 8) and Pipe 1 (on pulse 11). That will be on pulse  $9\frac{1}{2}$ , following rhythmic **Principle 3**, as observed in both drumming and dance of southern Africa – that of dividing up spaces of available time between two pre-conceived or pre-determined events, movements or sounds, often into two equal parts. *Murumba* supports this anomalous half-pulse beat of Pipe 7, giving a special character to the rhythm of *tshikona*.

The music in Figure 10 below shows the individual rhythm of each of the seven pipes. It therefore gives a close impression of what each pipe player experiences as he plays his part. The diagram can be used for teaching the pipe parts. It demonstrates for the first time in print exactly how the pipe parts of *tshikona* are rhythmically structured. The rhythmic space between the two notes played by each pipe is shown by the two numbers written at the end of each line. They add up to twelve, the number of pulses in the cycle. For instance Pipe 2's rhythmic spacing space is 6 and 6, which means the rhythm of its two notes is equi-spaced. Some pipes share the same spacing, but start playing at different points in the cycle, such as Pipes 1 and 2, also Pipes 3 and 6.

The diagram also clarifies the precise sequence which the pipes follow. If you play Pipe 4, for instance, you know that you will always play after Pipe 3. But be careful, for the space to leave after Pipe 3 is not quite the same each time. You will also notice that one of your notes will always coincide with Pipe 1 and the next with Pipe 7. 'Playing after' is the first consideration in the mind of the player when learning. The pipers stand in the precise order of their Pipe numbers. The precise rhythmic alignment of each part

is taught only once the ‘after’ relationship is mastered.<sup>11</sup> Some pipes are considered easy to play, others harder. Pipes 1 and 2, both 6 + 6 pulses, tend to be given to beginners. Some say Pipe 5 is the hardest.

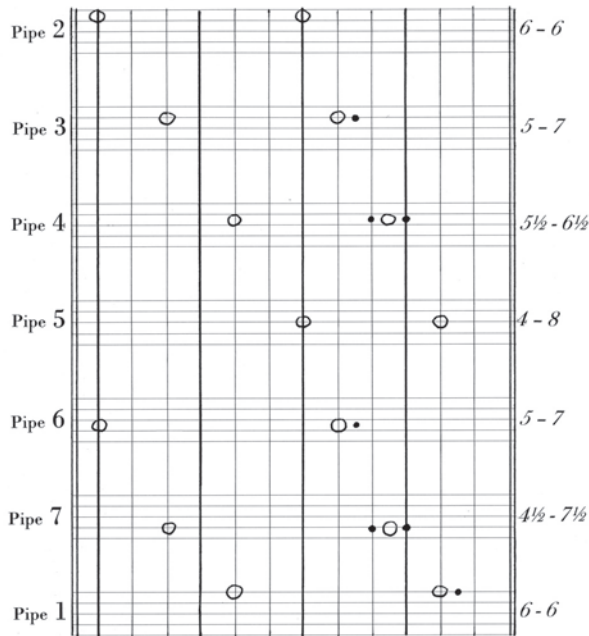


Figure 10. The seven pipe parts written separately, showing the two notes played by each, the relationship with the *thungwa* drum, and possible alternative readings for some notes.

All the pipes but for Pipe 2 show an alternative position for one of their two notes, all the alternatives being in the ‘hazy’ second half. The small black notes show where they could be positioned according to imaginable alternative readings of the rhythm such as A) or B) described earlier, for instance when playing without drums, and allowing for the tendency of players to equalise the space between beats.

### The ‘piece of history’

We do not know how the Pedi *dinaka* sounded during the period when their neighbours the Venda arrived in their country between c. three and four hundred years ago.<sup>12</sup> But the Pedi speak one of the Sotho languages, and there also exists the nearby *ditlhaka* reedpipe tradition among the Sotho/Tswana/Lete in Botswana.<sup>13</sup> Some oral history

<sup>11</sup> This reminds me of what I was surprised to learn at steelband rehearsals in Trinidad. The players were taught the plain sequence of notes first; their rhythm and relation to the beat came later.

<sup>12</sup> Van Warmelo 1932, Stayt 1968.

<sup>13</sup> Ballantine (1965), regarding *ditlhaka*, which itself is more than likely to have been inherited from the Khoi (Kirby 1934).

says that the Pedi learned their reedpipe dance from the Venda, others the reverse. However, if the Pedi *dinaka* had existed at that time and had sounded anything like the Lete *ditlhaka* do now, which is not unreasonable to imagine, the proximity of the two peoples could be the reason why the Venda and Lete pipes seem to share an approach to rhythm where all the pipes share in producing one rhythm pattern. (See Figure 5)

Ballantine analysed the Tswana/Lete *ditlhaka* as a complex polyrhythmic structure, which should not surprise anyone who has attempted to understand any other apparently simple southern African music. Nevertheless many of the Lete tunes *sound* – perhaps more to a non-Tswana ear – like a continuous stream of near-equal beats, in two-pipe harmony. With the Venda, five of the seven pipes also play in this unusual way (for southern Africa), at a regular two-pulse spacing (on pulses 11, 1,3, 5,7), as seen in Figures 5 and 9. The remaining two pipes adapt, or squeeze, into the rhythmic space available, under the compelling influence of the timeline, which came with them from their northern origins. This approach is quite unlike the other one-note traditions in the southern African region mentioned earlier. In all those, each pipe pursues its own independent rhythmic way. Nevertheless the Venda do share an important rule: ‘one song – many dance steps’ with the Nyungwe *nyanga*, while all the others have the principle: ‘many songs – one dance step’. Unfortunately we do not yet have any deep musical study of the present-day Pedi *dinaka* nor the Valley Tonga *ngoma buntibe* nor the Chopi *chimveka*, even at this late date in southern African music research.

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## Appendix: Tuning table

Pipes 1-7	1	2	3	4	5	6	7	1
<b>Kalavha</b>	288	268	236	212	200	182	160	144
Hertz								
Cents Intervals	<b>124</b>	<b>221</b>	<b>185</b>	<b>101</b>	<b>163</b>	<b>224</b>	<b>182</b>	
<b>Sundani</b>	260	236	212	196	178	161	144	130
Hz								
Cents	<b>168</b>	<b>185</b>	<b>136</b>	<b>167</b>	<b>174</b>	<b>193</b>	<b>177</b>	
<b>Hamangilasi</b>	272	248	220	200	184	166	148	136
Hz								
Cents	<b>159</b>	<b>208</b>	<b>165</b>	<b>145</b>	<b>178</b>	<b>198</b>	<b>147</b>	
<b>Phiriphiri</b>	364	340	300	264	240	220	196	182
Hz								
Cents	<b>118</b>	<b>217</b>	<b>222</b>	<b>165</b>	<b>150</b>	<b>200</b>	<b>128</b>	
<b>Vhutavhatsindi</b>	416	400	364	316	288	264	232	208
Hz								
Cents	<b>68</b>	<b>163</b>	<b>246</b>	<b>160</b>	<b>151</b>	<b>223</b>	<b>189</b>	
<b>Rambuda</b>	268	240	220	196	186	166	150	134
Hz								
Cents	<b>192</b>	<b>150</b>	<b>200</b>	<b>91</b>	<b>197</b>	<b>175</b>	<b>195</b>	
<b>Thikundwi kha Sialala</b>	356	332	296	252	244	220	200	178
Hz								
Cents	<b>121</b>	<b>198</b>	<b>279</b>	<b>56</b>	<b>179</b>	<b>165</b>	<b>202</b>	
<b>Mbilwi</b>	288	260	232	216	196	182	164	144
Hz								
Cents	<b>177</b>	<b>197</b>	<b>124</b>	<b>168</b>	<b>128</b>	<b>181</b>	<b>225</b>	

Figure 11. The tuning of eight *tshikona* reedpipe groups, as estimated from recordings of live performances from L. Gumboreshumba's field recordings, using the ILAM set of 54 tuning forks covering one octave. The Hertz figures indicate the pitches in terms of vibrations per second. The Cents figures show the size of the intervals between each pipe by reference to the Western tempered semitone which is defined as 100 Cents. Due to the subjectivity inherent in the procedure and in the instruments, the figures give an impression of somewhat more precision than can be claimed in these days of digital accuracy. Yet they still support the conclusions reached.