

Ethiopian Kiñit (scales) Analysis of the formation and structure of the Ethiopian scale system

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The aim of this study is to analyze and categorize the different scales (Kiñits), which are found in Ethiopia, because the point has been and is controversial. This study will divide the entire country into three zones, and will try to analyze their musical structures, and then come up with clear (accurate) ideas about the Ethiopian scale structures. The study finding might resolve some of the controversial points. For the purpose of analysis different representative musical materials are recorded from different areas of the country, and sample materials were selected and analyzed.

Ethiopian music has an important social and cultural impact on the people of Ethiopia and existed in the area for quite a long period of time. The music is mainly based on a pentatonic scale and modal tone system. Vocal music is equally popular as instrumental music, one can listen a vocal music without instrumental accompaniment especially without drum, which is very common through out the country, but one also listen instrumental music especially string instruments together with voice and percussion (Membraphone) instruments.

The diversification of musical elements is the peculiar identity of Ethiopia. Melody sung on simple two or three tone scale, or much developed melodies sung on different pentatonic scales; up to the completed two three part songs composed on diatonic scale system could be heard and found through out the country.

Some components characterize Ethiopian music are:-

- A tone system with specified interval structure e.g. Kiñits (Tizita, Anchihoeye, etc)
- The melodic structure, which is based on melismatic or ornaments.
- Rhythmic structure which produces a rich variety of rhythmic patterns, used to accompany vocal and instrumental music.
- Vocal music.
- Specific social contexts for the making of music, these includes songs for wedding, work, etc
- There is a clear distinction between religious (sacred) and secular music; i.e. a music sung or composed for secular purpose will not be used for sacred or religious rituals; but it is so common to listen and attend both musical performances similar time and places. E.g. Timket

Despite differences in the musical and aesthetic forms, the music of Ethiopia existed for over three thousand years and can be said have distinct musical culture (style) from that of other African countries. The reason might be laid on the countries early histories of trade and other connections with the near and far countries, which brought many

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cultural or musical elements from these countries to Ethiopia. Because when people constantly meet in certain areas exchange of views and ideas are inevitable.

Ethiopia is among those nations who have a rich and diversified cultural heritage; i.e. language, tradition, art, music etc and still preserved those cultural heritages.

Ethiopia is made of numerous ethnic groups, each of which is with its distinct religious beliefs and folk traditions. "Ethiopian music has been described for ages as monotonous, pentatonic and repetitive trace. Its texture is said to be monophonic concentrating more on rhythmic elements than having a vertical structure "Senayet(2006:1). Many authors or researchers are describing Ethiopian music as monotonous and the scale structure as pentatonic :(Powne; 1968, Ashenafi 1989; Zenebe 1987). This type of conclusion may lead to wrong understanding and one can consider slightly different types of music from the mentioned ones that are played and created in Ethiopia as other entities.

Musical Map of Ethiopia

The aim of this study is to analyze especially the scale structure of Ethiopian music; by taking different sample musical materials from around the country. The countries traditional music grabbed in texture of Ethiopianness has distinct traditional identity that suggests the region of its origin. For the purpose of this study the different ethnic groups can be divided in three regions.

1. Northern and Central
2. Eastern
3. Southern Western areas of the country (Ezra:1993:2)



The northern and central parts of Ethiopia cover a large area, which with the exception of rhythmic variations pentatonic scales are widely used. This could be heard in Amhara, Tigrina, Oromo and Gurage songs or listen to the Azmari songs, but the pentatonic scale are not limited to the usually said four Kiñits, there are a number of pentatonic scales existed in the musical practice of these areas.

The second, the eastern which includes Harer and its environments i.e. Adere, Somali, Kotu; because of the influence of Islam and their contact with the Arab world especially with Turks, the Arab cultural influence is seen in different cultural practices.

These demonstrate the adoption of minor scales (Meqam). eg. Adree music. The Ethiopians had contact with their Muslim neighbors since the earliest period of Islam, ...Islamic influence upon the countries music suggests that attitudes towards musicians in Islamic societies may also have had an impact; Shalemay(.1982:131). But the use of pentatonic scale is also popular in this area e.g. Somali's music.

Thirdly, the Southern regions such as Gambella Kullo, Dorze etc music are using different types of scale system of that of the two regions. The types of scales (Kiñits) used in these areas are started from two-tone scale up to the complicated type of diatonic scale, e.g. Anywaa songs, Dokko songs, its rhythmic structure are rich and complicated and have homophonic factor. These can easily listen from Dokko songs or Derashe music.

Scope of the study

The study will only deal with the scale structure of Ethiopian music especially the secular music, it might not be exhaustive in covering all the areas, but the study tries to deeply analyze the sample material collected in these areas. And this paper will not deal with the musical style, vocal or instrumental tradition of these regions.

Scale or "Kiñit"

According to many theoreticians scales are classified according to the number of tones used, their range and their intervals (Copland 1939; Perschetti, 1961; Lawn and Hellmer 1993); e.g. Diatonic, Pentatonic, Hexatonic, Whole tone scale.

The simplest scales in the world comprise two tones; the interval is usually major or minor second or less frequently a minor or major third. Such type of simple form of scale structure is found in some parts of Ethiopian folksongs, e.g. the Southern and Western music. Some folksongs also use three-tone scale, i.e. only three tones, this type of scale could be found in most parts of the country; e.g. children song.

The most widely used scale according to this classification is the pentatonic. The name "Pentatonic scale" is undoubtedly more familiar than the other names that indicate the number of tones in a scale, but it poses a problem to ethnomusicologists nonetheless. There are obviously as many varieties of the five-tone scale as there are many possible combinations of intervals, and the pentatonic in its varied forms is the scale most frequently encountered in folk, oriental and other types of music (Jazz, pop, or even Classical) throughout the world.

The most common pentatonic form which is used throughout the world is the major pentatonic scale, composed of major seconds and minor thirds, for example, C D E G A, with the tonic (starting or central tone) occurring on any one of the tones, scales that lack half steps, like this one, are called anhemitonic. (Anhemitonic, scales which do not contain one or more semitones).

Callow and Sheperd, 1972; Jhaiabhoy and Stone, 1963, and Zonis, 1973 in Abraham 2006, expanded that in traditional western music, scale notes are most often separated by equally tempered tones or semi-tones, creating at most, twelve pitches. Many other musical traditions employ scales that include other intervals or a different number of pitches. In Middle Eastern Heiaz scale, there are some intervals of three semi-tones.

Gemelan music uses a small variety of scales including Pelgon and Slendro none including equally tempered intervals. Ragass in Indian classical music often employ intervals smaller than a semi-tone or Arab music Maqams may use quartertone intervals.

As explained earlier in Ethiopia there exists different types of scale, among these of scales the pentatonic scale is the dominant one. Many experts in the area of Ethiopian music and Ethiopian musicians, traditional and modern; (Poune, 1968; Ashenafi 1989; Zenebe 1987; Alemayehu Fanta 2006) are admitted that there are four Kiñits (scales) in Ethiopia. These are:

1. Tizita
2. Batti
3. Ambassel
4. Anchihoeye

It is also accepted that Tizita and Batti have their respective major and minor mode. An important element that has to be mentioned here is that, Pentatonic scale is that widely used one through out the country with other types of scales, but describing Ethiopian music as only pentatonic based or origin leads to wrong description understanding.

Analysis of Ethiopian scales (Kiñits)

As explained earlier, the countries musical geography can be divided in to three regions, the 1st and the largest area is the northern and central part of the country, which includes Tigry, Amhara, Oromo, Gurage and other ethnic groups pentatonic scale is widely used; but the verities are not limited to only four, there are a number of pentatonic scales practiced in these area. Even the four popular Ethiopian pentatonic scales have different types (not only major and minor).

For the purpose of this study sample materials are collected from the three regions. Data's are collected by Yared School of music students- more than 15 students were sent into the different areas and collected more than 250 songs. For the purpose of this study few selected and representative musical materials analysis will be presented. Apart from these folksongs and modern pop songs (compositions) will be used as an example.

One important element which has to be mentioned here is that, definite pitch value is not existed in the traditional instruments; i.e. every single instrument produces different pitch, this is because traditional instrument makers do their works without having limited length or width of the instruments, their main concern is the would be produced sound from the instrument, i.e. the sonority.

Normally, to analyze Ethiopian music scale is has become customary to use Latin (European) notation in order to explain these scales. For example DO, RE, MI, SOL, LA, DO as Tizita mode. As the production of our traditional musical instruments do not have standardized measurement for the strings, sound, body size etc, it will be very hard to talk about a common tone for the instrument. As a result it becomes very difficult to determine the sound or range of any given traditional musical instruments. Therefore with the designation of the scales (Kiñits) by the Latin musical notation -DO, RE, will not be the fittest explanation to indicate the Ethiopian scale, but indicating the scales (Kiñits) by their intervals relationship i.e. Maj. 2 + Maj 2 + min 2 + Maj 2 + min 3 will give us clear picture about the Kiñit structure, this i because, all traditional instruments do not produce a certain musical sounds have limited frequency, but all traditional instruments played similar intervals to play the popular Tizita Kiñit or even songs in that Kiñit. But this sound not to be taken to the generalization or to the conclusion that, Ethiopian music cannot be written by western or Latin notation system (Kimberlin). As Zenebe explained the notation of the church music is not able to describe the exact pitch or tell in what major or minor scale the melody is sung. This problem creates the

different schools. The signs that fail to illustrate the exact pitch might lead the teachers to interpretation and using their own teaching methods (1987:62).

One thing has to be clear here is Ethiopian traditional musical instruments (especially string instruments) can be tuned according to the performer's vocal range, and furthermore it can also be tuned and played with of Ethiopian can be notated (Sacred or Secular) in Latin (European) notation system with some descriptions. For the purpose of analysis in this paper I used both intervals and Latin (European) notation, which I think will give easy understanding for the wider audience.

1. Northern and Central area

What I labeled as the Northern and central covers a large area (refer them up) over which with the expectation of rhythmic variations pentatonic Kiñits (scales) are widely used. The term "Kiñit" is used to describe the secular Ethiopian instrumental tuning system as well as the pitch structure of songs (Shelemay 1982:132). The main ethnic groups lived in this area are Amhara, Tigray, Oromo, and Gurage. It will not be my intention to study the social and other cultural relation of these ethnic groups; even this study will not deal about the different musical elements of this area, e.g. Dance, vocal system, rhythm etc. The paper thoroughly concentrates on the musical scale system of these different areas. Music is an invariably communal activity, which brings people together in specific alignments, whether as musicians, dancers or listening audiences. The "tuning in" through music of social alignments can provide a powerful affective experience in which social identity is literally "embodied". Thus in certain societies, music and dance are the only means by which the wider community appears as such to it self (Stokes, 1994:12). This is purely seen in the musical experience of Ethiopia, especially in this area.

As stated earlier pentatonic scale is the dominant element of this area, and what differs the music of the different ethnic groups is rhythm. The songs collected from this area are from Tigray, Amhara (Wollo, Gonder and Debre berhan) Oromo (different areas even to the southern parts of the country) and Gurage and modern popular songs sung in these languages.

A. Songs in Tigray (especially) traditional songs in this area- the dominant pentatonic scale or Kiñit is - Maj 2 + Maj 2 + min 3 + Maj 2 + min 3 and Maj 2 + min 3 + maj 2 + min 3 + Maj 2. This can be easily heard in Ashenda songs and can be illustrated in C major scale as follows:-

Do Re Mi Sol La Do	→	Tizita Major and
Re Mi Sol La Do Re	→	Dorian Pentatonic or
Mi Sol LA Do Re Mi		Yematbela wofe Kiñit

B. Amhara - The widely used pentatonic scale in this area are

1. Tizita major or minor - in Wollo and other areas
2. Dorian penta tonic
3. Mixolydian (Ambassel) or widely used in Gonder and Wollo

4. Ambassel
5. Batti with its different types
6. Phrygian Pentatonic

C. Oromo:- in this area the widely used Kiñits are

1. Tizita
2. Batti
3. Three tone scale e.g. C E^b F[#] (which looks like a quarter tone and can played in Masingo)
4. Dorian and Phrygian Pentatonic

D Gurare- the widely used pentatonic scales are

1. Tizita
2. Batti
3. Dorian and Phrygian pentatonic scales.

The other popular pentatonic mode widely used in this area is the Anchhoye mode. This scale is used especially for festivals and weddings.

Characteristics of the Kiñits

The widely used and popular Ethiopian pentatonic scales are four, but in the musical practice there exists other types of pentatonic scales. First, I will try to analyze the four popular Ethiopian Kiñits; starting with

1. Tizita

Formerly was known as wollo Kiñit because of its use by the Azmaris around this area. The name is given because of the popular Amharic song sung in this Kiñit. This pentatonic scale has two varieties Major and minor (Traditionally known as Full Tizita and Half Tizita). As I tried to explain earlier (even though the traditional instruments do not have perfect pitch value): I will use Latin (European) music notes for the scale (Kiñit) analysis by using DO (Middle C) as the starting point Tizita major or Full Tizita



Tizita minor (Half tizita)



You can easily listen both in different traditional and popular songs e.g. Mahamud Ahmed Tizita song. Tizita major or major pentatonic scale is common and widely used in traditional, pop, jazz and even classical music through out the world.

2. *Batti*

The name is given because of two reasons

- a. Because of the popular song called Batti
- b. Because of the Kiñit or scale widely used in Batti area or Wollo.

This Kiñit has different types, which are used in the popular and traditional songs.

1. Batti major



2. Batti minor



3. Batti Lydian



4. Batti minor with raised fourth



5. Batti Major with raised fifth



As an example of the above Batti Kiñits; for the first one Batti major, listen to Kassa Tesema's Batti and many traditional Amharic, Tegrigna, Guragigna and Oromigna songs. The second type is more popular through out the area even easily found in the different part of the country's musical practices. It's also common through out the world (minor pentatonic). The third type of Batti is Batti Lydian Because of (Augmented fourth between the root and the fourth). This type of Batti Kiñit is widely used by the Azmaries. The fourth type batti minor with raised fourth as an example you can listen Baheta's Anchim endelela. And the last type Batti Major with raised fifth a good example will be Getachew Mekuria's Saxophone Shelela. This are a very few examples of songs sung in these different types of Batti Kiñit.

3. *Ambassel*

The name given for two reasons as mentioned earlier on Batti.

- Because of the popular song Ambassel
- Because the popularity of this Kiñit in Ambassel or Wollo area

Ambassel normally has single type, but recently because of different reasons, it has two types. The popular and widely used one is

A.



The second one that is not so popular is



The first one is accepted by modern or traditional musicians as Ambassel Kiñit but the second one more of popular by other name, it is a Mixolydian pentatonic scale and as I mentioned earlier widely used and traditional and popular songs. e.g. songs in Gonder area and popular songs like Ieyew Demamo.

4. Anchihoeye

The name is given from the popular tune "Anchi hoye lene". The Kiñit is widely used in festival and weddings. It is considered by most music experts purely Ethiopian scale Kiñit. But some singers used mixolydian pentatonic instead of Anchiyoeye.

See the two Kiñits in the example

Anchihoeye Kiñit



Mixolydian pentatonic



Most musicians used the first example s Anchihoeye especially while tuning the Begena, but Alemu Aga tuned Begena by using Micolydian pentatonic and he and others considered this scale Tizita, which is quite different from Tizita. One interesting thing here is that some musicians used and considered mixolydian pentatonic as Ambassel and others used and considered it as Anchihoeye; but it has to be considered as a different entity of pentatonic scale. Since many songs were/are sung in this scale, and has its own characteristics.

4.a. Other popular pentatonic scale found in this area is the Dorian pentatonic or Yematebela wofe Kiñit.



Especially in modern popular songs this Kiñit is widely used.

b. The other popular pentatonic scale is the Phrygian or Shegaye Kiñit



These two Kiñits considered by many musicians as Batti, but they do have different structures.

Generally, in the Northern and Central parts of Ethiopia; the dominant scale is pentatonic scale but the numbers of scales are not four it is more than that as shown in the above example.

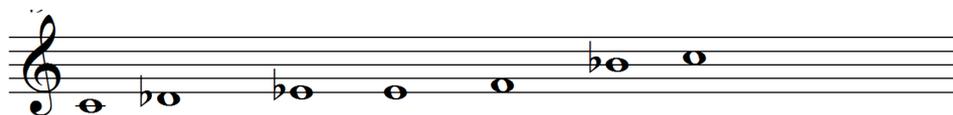
2. Eastern part of the country,

Because of its contact with Middle East especially Turks and the Arabs diatonic minor scale can easily heard in this area. e.g. Adere music. But pentatonic songs are also popular in the area e.g. Somalie and Adere songs.

In its nature Hareri music resembles the music of North Africa where most folk music is vocal. ...The music is entirely vocal expect for the use of small Drums and percussion instruments. (Senayet: 2006).

Analysis of the music of this area seems controversial, but one common understanding is that the influence of Arabic music is significant in this area. It is good to refer one of the Yared School of Music student strong observations on this issue; She said that; when considering the scale of Harari it is good to start from what has already been written by different people.

Zenebe Bekele (music of the horn) described Harari scale as follows: The seventh mode in Ethiopian music represents Adere's chromatic type scale, which is called Sabai silt. If we are to write this on C Major Scale it is as follows

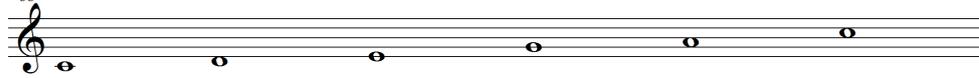


Zenebe Bekele reinforces this in his other book "Chelanchil" (1990) another scholar Michael Powne described the Hareri music as being in the harmonic minor and occasionally Arabic minor scales. The C minor harmonic scale is as follows



Numerous other scholars also supported the belief that the peculiar future of Hareri music is its harmonic minor scale. The information I have gathered from my informants and my observation of traditional Hareri songs both recent and up to four decades old lead me to completely reject the above opinions. The Harari scales that belong to the rest of east Africa as well therefore, the term Adere or Harari scale is not convenient to use. The scales present in Harari music are as follows:

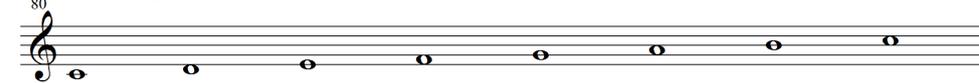
Tizita Major scale (Pentatonic Major scale)



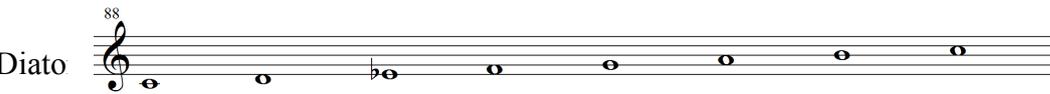
Batti minor scale (pentatonic minor scale)



Diatonic Major scale



Diatonic minor scale (pentatonic minor scale) ional songs



My observation and the musical analysis also lead me to agree with Senayet's conclusion moreover, the Harari women's sung polyphonic songs which is quite peculiar (different) from the Arab music. The polyphonic texture might be the influence of the music sung in the northern and central parts of the country. e.g. music of Lalibelo: As Shelmay stated, two part polyphony in the Lalibela performance is of particular interest since multi-part music is not usually found in high land Ethiopia (1982:132). Listen to the three styles of Harari music performance.

1. Sale-Solo
2. Worse-Duet
3. Dersi-Chours

The second one sung by Duet (two women) in polyphonic texture.

The other type of scale used in this area is Major pentatonic i.e. Tizita Major and Dorian pentatonic, this could easily heard in Soamalie and Adere music.

3. Southern and western parts of the countries

This area is characterized by peculiar music characteristics comparing to the two areas. Rhythmically rich and complicated, the musical texture is homophonic using two or more voices using a concert of wind instruments etc.

The widely used scales are

1. Tizita Major
2. Batti minor
3. Major diatonic scale
4. Natural minor scale.

Some scholars who did study on this area even suggested that, their scale to twelve-tone scale (Mulatu Astatke). Whether is the case, the data's collected revealed that, the music of these area is mainly based on diatonic scale i.e. mixture of both and as an example the above mentioned four types of scales are common.

Sample of Gamo people song

Ethiopian Kiñit (scales)

The image shows a musical score for an Ethiopian song. It consists of five staves. The top staff is labeled 'Female' and contains a melodic line in treble clef. The second staff is labeled 'Male' and contains a melodic line in treble clef. The third staff is labeled 'Female' and contains a melodic line in treble clef. The fourth staff is labeled 'Female' and contains a melodic line in treble clef. The bottom staff is labeled 'Male' and contains a melodic line in bass clef. The music is in 2/4 time and features a variety of notes, including quarter, eighth, and sixteenth notes, as well as rests.

The above song is one of the examples of many part songs in the area.

It is evident that Ethiopian music has different types of scale structures which is not limited only to four and the music also is not limited to Monophony: it has different structures. i.e. Polyphony, Adere music or Lalibeloch music and Homophonic. Amazing ensemble of musical instruments, i.e. string and wind (the collection of wind instruments a wide range of horn and wood wind that produce one to three tone played in group to produce a fantastic melody) with voice and dance is a very common practice in South and Western area.

Conclusion

Music is a medium through which man expresses his ideas, feelings etc. As an element of music; scale (Kiñit) is an important factor to identify the music of different ethnic groups. e.g. Music based on diatonic i.e. Western music and pentatonic based or primitive music. Man adds musical tones as his expresses his ideas and feelings through melody.

Different Ethnic groups used different types of scale, from two-tone scale up to complicated diatonic scale. This shows the language used and the melody created in that ethnic group language adequately utilized the existing scales and it properly expresses their ideas and feelings.

The Ethiopian music is used or using different types of scale system. The dominant scale that used through out the country is the different type of pentatonic scales. Other types of scales also are used. This actually distinguishes their music. e.g. Harari music scale i.e. minor diatonic scale. The widely used pentatonic scales and other scales are

1. Tizita
 - a. Major
 - b. Minor
2. Batti
 - a. Major
 - b. Minor
 - c. Lydian
 - d. Minor with raised fourth
 - e. Major with raised fifth
3. Ambassel

4. Anchihoeye
5. Dorian pentatonic (Ymatebela wofe)
6. Phrygian pentatonic (Shegiye Shegiye)
7. Mixolydian pentatonic (Ieyew Demamo)
8. Diatonic minor scale
9. Diatonic Major scale
10. Other scale, which do have two or three tones, i.e. two tone or three tone scales. ...
And generally it will be misleading to say that Ethiopian music has four that is only pentatonic. I strongly suggested that the Ethiopian scale system is diversified and better to be evaluated based on its numbers or intervals and is not limited to four and only pentatonic.

Definite pitch value is not existed in the Ethiopian traditional instruments and the analysis or identifying the Kiñit would be good to determine by their intervallic relationship, because the interval produced by every instrument will be constant; thus Tizita Major will be Maj2 + Maj2 + min3 + Maj2 + min3. But Ethiopian traditional particularly string instruments can be easily tuned and they can easily perform with other instruments, i.e. one can use definite pitch value if he/she wants to play with western instruments.

This paper focused only on the scale Kiñits existed in Ethiopia. But still it is felt that further studies are needed on the scale, vocal style, performance ability, etc of Ethiopian music.

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