Vitiating Oral African Musical Traditions by (Mis) Representing Them Through Western Notational Systems

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Abstract

The concept of musical literacy has tended to be associated with the ability to read and write in conventional ways of representing music. We feel that this needs to be extended to include the ability to practically exhibit one's musical knowledge through singing, playing a musical instrument or dancing. African musical cultural traditions have been passed on from generation to generation via the oral tradition. The advent of colonialism and Christianity has brought with it western ways of doing and representing concepts which exist largely in the written tradition. Tonic solfa and staff notation have been used to notate African music. These methods leave out everything else that cannot be notated; ululation, dance, whistling, vocables, and several other para-linguistic performative expressions. African performers improvise ad libitum and do not do it the same way always. When the music is transcribed, it implies a fixed do-it-this-way form which is uncharacteristic of African music performance. Through a historical and methodological-literature point of view, we present new discussions by musicologists and ethnomusicologists in Africa or of Africa. We strongly feel that the strengths of using western notational systems to represent African music are outweighed by the weaknesses because the use of them superimposes the written over the oral tradition. From a Critical African Cultural studies perspective, we argue that this is reductionist as the music score cannot stand in for the totality and beauty of an African music performance. The conclusion calls on upcoming ethnomusicologists in or of Africa to proffer new directions that are embedded in being, becoming, and remaining African.

Introduction and background

The music of Africa has long intrigued many Westerners. Great reflection on this matter is revealed in their efforts to represent it through Western notational systems. African musical traditions stand among those frequently sampled for transcription in foreign notational systems. For centuries, the beliefs and knowledge of Africans were transmitted orally from one generation to the next. Music was passed on from one performer to another by imitation and memory. With the advent of the written word in various parts of Europe, attempts were made to represent African music using Western notational systems. According to Nzewi (201:25)

> *The reliance on oral tradition for the transmission of Africa's indigenous knowledge systems from generation to generation served its purpose for old Africa, when it did not know of any other means of knowledge transmission. It probably would have served Africa up until today if Africa had not been colonised by the Western nations and forced to adopt their way of life and traditions… Africa has been forced now to rely on the Western method of documentation and knowledge preservation for its viable cultural heritage.*

There is something to be gained by looking closely at the idea of representing African music using Western notational systems, which we view as one of the many consequences brought to Africa through the advent of colonialism. Some notes on how to decolonise should include restoring value in the oral tradition, even if we will obviously now inevitably have to use it alongside the literacy tradition. Having learnt and taught transcription and analysis of music for a combined two decades now, we have come to realise two things; that African mbira, marimba, and drum rhythms are not easy to notate, and that learning music through notation is a Western practice. This motivated us to interrogate the practice.

Music transcription began as a tool of colonial acquisitiveness. Voyagers collected and recorded music for armchair scholars to speculate about these cultures during the era of comparative musicology. Western notation was used because it was the only technology available and not for any scientific reasons. We strongly think it is problematic to continuously measure African music using Western methods and ideologies as this perpetuates colonial mentality many decades after the demise of colonialism. Somehow, in post-colonial times the practice is still on and this has left us with the following questions: Why have western music notational systems perpetually been used to misrepresent African music despite their notable inadequacies and apparent irrelevance to portray the beauty of African music performance? What notes ought to be proffered in order for African music academies to decolonise, challenge the status quo, and begin to represent African music in ways that value the context in which it has always existed? Should scholars find value in the oral tradition of transmitting African music?

Music is an important aspect making up Africa's material culture. It is true that writing a musical idea on paper can be a step towards preservation of the music. However, this can only be true if an accurate representation of the music is done. Otherwise ideas of what one thinks to be African music can be considered for the preservation. To put it crudely but to the point, representing African music using western notational systems is allowing injustice to prevail basing on the fact that

Western and African cultures differ. One of the major issues lies in the complexity of African rhythms. We acknowledge that this is not a new argument, but it is also at times too mechanistic and essentialist, both about "African" and "Western" music, without caveats. In the latter case, the problematization of notation has also long had relevance among musicologists, especially, though not only, ethnomusicologists for some while about local musics. That western notation systems are reductionist and inadequate to represent the music of Africa has been said before (Seeger 1958; Agawu 2003; Stone 2008; Temperley 2000). Reference is also made to the variety of scales in use, the cacophony of the drums and music, the decorations done to the music not forgetting the incoherence of African music caused by irregular vibrant rhythms. The status of the music, its effect and inevitably the aesthetic foundations are also factors of great concern.

To mark parameters for our discussion, we exclude North Africa from this discussion of representing African music because that region of the continent has a strong corpus of indigenous written tradition which also includes musical representation. The article discusses Sub Saharan Africa and also makes references to West African musics. This division has potential to be musically tenuous considering the various scalar and harmonic and tonal affinities shared by various peoples across the continent within and beyond chromaticism (twelve tone scales) and the open-endedness of non-fixed tuning. In the first section we provide definitions to give clarity on what is Western notation and what is African music. We contextualise the concept of African music in relation to efforts to represent it using conventional notation systems of tonic solfa and staff notation. This we do to allow a smooth entry into an examination on whether justice prevails when African music is represented using western notational systems. The second and third sections articulate the positives and negatives of representing African music using Western notational systems. The conclusion points out that representing African music using Western notational systems is problematic as it superimposes the literacy tradition over an oral tradition, and efforts to look for contextualised means of representing this unique genre continues to be a void for researchers to work on.

The conceptual dilemma

McKechnie (1978) defines notation as the use of signs as symbols and points out that the note is a mark by which a thing is known. Byrd (1984) defines music notation as a system for representing music in written glyphs or characters by encoding its pitch, duration, rhythm, lyrics and ornaments. It can be examined both syntactically and semantically as in the case of natural language. According

to Roads (1985) Western music notation is a graphic system used to encode music so that it can be interpreted and reconstructed by people. It is a type of music that emanated from the Europeans and their former colonies. This type of music encompasses most of Western classical, American Jazz, country, pop, hip-hop and rock and roll music. Kurkella (1986) defines music notation as either a description of sound events or as a set of instructions for performers. The system is also called conventional music notation or common Western music notation (CMN) and staff notation. Western presumptions of literacy constrain these definitions and locate considerations of representations primarily within written technologies. There is a need to specify what is African music, or at least come to some generally shared understanding of what that might mean. We vindicate our broad notion about the distortive effects of notational forms upon the appreciation and misapprehension of African musics. For example, Agawu elaborates extensively some musicological commentaries upon the critique about the musics under analysis, and about ethnomusicologists misreading of the need to understand "text" and "context," between the "musical" and the "social". (Chernoff (1979) defines African music as a cultural activity which reveals a group of people organising and involving themselves with their own communal relationships. Here music is viewed in terms of communal gatherings where people share the cultural activities of a particular society. The music expresses the day to day activities of African people's life. Nzewi (1997) defines African music as a social event. Following this view, African music is regarded as an art that is difficult to understand as it depends on the culture to which an individual belongs. Nketia (1974) concurs with Chernoff when he defines African music as a public performance that takes place during social occasions when members of a group or a community come together for the enjoyment of leisure, for recreational activities. This means that African music is that kind of music that celebrates culture and group gathering.

Authentic African music is generally music of the indigenous inhabitants of the continent. It is little known abroad, although it has penetrated some Western communities through academic travel, live performances abroad by culture bearers, the internet, and most recently social media platforms. As a result, some non-African listeners can find the music strange, difficult and unattractive and can often conclude that it is not of interest. African music is sung in ethnic languages which are not universal, though music the sound itself has been described as a universal language. So this is an analogy to be pursued with caution in order to be understood by those within and outside the culture from where the music originates. Blacking (1976) holds that music is a product of the behaviour of human groups hence the sound properties and non-sound elements organised from the human group behaviours are governed by the convention peculiar to that society. Nzewi

(1997) remarks that it is a society that ascribes meaning to music in terms of its sound implications and non-musical essence. Music is sound that is organised into socially accepted patterns. Some or all processes used by the society in the organisation of its human relations are used to organise available musical sounds. A context sensitive grammar is more powerful than one which is context free. Music is better understood if it is not detached from its context and regarded as sonic objects. It should be treated as humanly organised sound whose patterns are related to the social and cognitive processes of a particular society or culture. Blacking (1976) expresses his reservation about misrepresentation of African culture by Westerners who do not understand African people and the functions of the arts in Africans' lives. This means that a context based approach in the study of music and dance is necessary.

Also 20th century electronic notation of music on the tape, video, and film strategies have been integrated into the process of music transcription as a source of and model for various written notations. This has also been coupled with automatic transcription in which computer softwares are used to ease the burden of working out the accurate representations of the song elements of pitch and rhythm. There are African music educators or performers who have embraced the modern electronics.

Theory and method

From a historical and methodological-literature point of view, there are a lot of the new discussions by musicologists and ethnomusicologists in Africa or of Africa, such as Stone's (2012) Garland Handbook of African Music. In this paper we focus on the debates and assumptions about the value of Western notation for African musics by surveying literature on the positives and shortcomings of representing music from an oral (African) tradition using standards from a written (Western) tradition. Discussions about notation have changed quite dramatically over the past 20 years or so and there has been a sensibility about representing through different ways the nature of the "music" and its performance. While we attempt to point out problems of notating African music, it is also critical to identify the various on-going ways in which musicologists and ethnomusicologists have attempted, however inadequately, to remedy the problem of notation.

Critical African Cultural Studies becomes useful because it seeks to voice up on behalf of marginalised groups and in this case African music is made subservient to Western music through the perpetuation of western notational systems (Tonic Solfa and Staff Notations) whose use to represent African music is meant to superimpose them as superior. This paper highlights the need for contemporary

African music scholars to proffer new dimensions to the understandings of their musical cultural practices and not continue to leave this task in the hands of Western analysers who are bent on using their own standards and norms as the yardstick. While formal education has largely been western, and African music educators have embraced it, they need to evaluate and decolonise rather than consume everything wholesome.

Positives of using Western notation systems

The goal of music notation is not to put waveforms and decibels on paper but rather to give performers a set of instructions for what to play, how and when to play it. Simplified notation is a matter of necessity and Western notation more or less effectively strikes that balance. Goodman (1985) comments that centuries old, Western music notation with far or less information tends to be quite good after all at representing the vast majority of music in our culture. Writing music down makes it possible for a composer who makes up a piece of music to let other people know how the music is supposed to sound. That music can then be sung by anybody who can read music. If African music is not written down, then people can learn it by listening to it and trying to copy it.

Since African music is largely an oral tradition that is verbally passed down from one generation to the next, sheet music is not available in most African communities without formal western music education. As a result, young generations of Africans may end up no longer practicing or knowing the traditional music and dance of their ancestors if music transcribers do not avail it on score. In this regard African music can be viewed as an endangered species. Byrd (1984) points out that notating African music is an aid to memory and serves as a means of preserving music over long periods of time. This will facilitate performance by others and preserves music in a form suitable for study and analysis. Western music notation has played an important role in preserving African music performed for centuries. Although computer or electronic technology has provided new means of storing musical information, music notation is still used extensively, especially for academic analysis. Goodman (1985) states that notation is a significant invention that can enhance listening experiences and it may serve as a graphic map to melodic and rhythmic components of the music. In the majoring of former black schools African choral singing is appreciated and is still in use. It is taught orally or as sheet music. A considerable number of musicians still write in this way facilitated and at the same time limited by the tonic solfa notation. Up to the present day the tonic solfa notation has preserved many songs and is still of crucial importance for music performance and music education throughout Africa.

Stone (1985) argues that the Western notation system is flexible and adapts readily to pre-existing traditional ways of playing that encourage its wide acceptation and adaption. Looking at musics from the Sub-Saharan Africa, it can be demonstrated that listening alone is not always effective and reliable in understanding music. There are differences between played parts and aural impression. In order to reconstruct this relationship some sort of notation is needed. It allows for invention and expression of new kinds of music and new composition and performance techniques. Kurkella (1986) posits that Western musical notation, as complex as it may seem, is perhaps the simplest way to write down sophisticated musical ideas with a reasonable amount of information that gives us what is most essential yet leaves the rest to our musical imagination. Although many ancient cultures used symbols to represent melodies and rhythms, none of them were nearly as comprehensive as written language.

Shortcomings of Western notation systems

Some scholars have argued that oral tradition may not capture all the memory with accuracy. Entsua-Mensah (2015) says that oral traditions are not record material, they are not absolute, and their time depth is limited. Taking cognisance of these shortcomings of the oral tradition, we advise the use of oral traditions in conjunction with the literacy tradition if we are to represent African music correctly and enrich our understanding and appreciation of it. Their exercise of prudence and circumspection is critical in the use of oral traditions. Yet the shortcomings of Western notational systems when it comes transcribing African music seem to us to far outweigh the strengths, which we now turn our attention to in the following lines.

Seeger (1958) points out that Western music notational systems are inadequate to represent non-western music since the aesthetics of the performance are left out because they cannot be shown on the music score. He discovers the drawbacks of using Western symbolic notation for representing music outside the western cultural orbit to represent African music. He goes on to argue that music transcribers ought to go descriptive and make an attempt to show what the Western notation leaves through use of graphs and keys. To him, descriptive transcription can go a long way in complimenting the Western prescriptive transcription and comes in handy to push the ethnomusicologist's agenda of endeavouring to give a truer representation of musical performance.

It is important to appreciate that music is sound, not written notes. Patton (2002) argues that any system of transcribing music is at best kind of a short hand. Bowdich (1824) comments on the problem of producing a descriptive transcription that does not distort the music of another culture. A recurrent issue in notating African

music is the question of what percentage of a musical event or recording might be transcribed. Many scholars incorporate brief transcriptions, specimens of tunes (Kirby, 1965). Read (1969) recommends the transcription of full scores with complete performances of African music and dance. In this view, it can be concluded that Western notational systems have some shortcomings when it comes to portraying the full performance. There is virtually no way to make sense of this visual information, at least not if our aim is to play certain notes in certain combinations at certain times.

Western notation has shortcomings when it comes to representing African music. Byrd (1984) points out that one should not mistake the dots, letters and numbers on the pages of a transcribed piece to be music for music lies in the heart of rhythms and the best way to learn and understand a rhythm is to hear and play it. This is true for there is a serious problem even to a very good music reader in trying to derive meaning from the written symbols. A quarter note does not tell an African if the drum was struck with half of the hand, the whole hand or a stick. It does not indicate if the stick struck the drum skin and bounced off or it remained in contact with the drum skin. There is a marked difference between writing music and writing sound. Notation of African music shows perceived musical structure not sound. Western notation systems show the musical structure as perceived from a Western point of view and that may be totally different from an African's perception of the musical structure of the same sound. Through transcription, scholars have tested basic assumptions about basic aspects of African rhythm. They have explored musical analytical issues. Agawu (1986) discusses the relationship between drum rhythm and language, fixed improvisation and connected motoric and acoustic images. Kubik (1962) observes that the image of what is heard and the image as it is played are often different from each other. There is a problem of inherent rhythms. Rhythms may appear to be heard by the listener but are not played as such by any of the performers (Ibid). African drumming sets up inaudible cross rhythms between the moving of a musician's hands and the pattern actually emerging in sound. The staff notation has an inability to represent the complexities of multi part musics and imposes a tendency to force African music into a rigid binary time continuum (Koetting, 1970). Staff notation embodies Western musical traits and tends to transmit them to the music transcribed.

Moreover, Western music notation is complex. Reimer (1989) acknowledges this complexity by comparing music notation with both mathematical notation and the Chinese written language. The complexity of music notation is caused by not only the number of different symbols but the complex rules that govern the co-existence of the symbols. Music notation is not only complex in terms of the amount

of symbols or rules encoding information. As a graphical system, it also has rules and conventions that govern the visual layout. The main purpose of these conventions is to improve the readability of a musical score so that it can be interpreted correctly.

By Western standards, African music is complex. This is because two or more events tend to occur simultaneously within a musical context. Even for players of a solo instrument, the bow, there is manipulation of the instrument in such a way as to produce simultaneous sounds by playing overtones with the bow, humming while bowing. Sadie (1970) points out that overlapping choral antiphony and responsorial singing are principal types of African polyphony. Various combinations of ostinato and drone ostinato poly melody and parallel intervals are additional polyphonic techniques frequently employed. Several types may intermingle within one vocal or instrumental piece with the resulting choral tendency being the stacking of parts or voices. Consequently 3 or 4 part density is not an uncommon African musical feature. Such densities are constantly fluctuating so that continuous triads throughout an entire piece are uncommon. Allen et al (2015) concur when they note that "In many African traditions, rhythm seems to be privileged over melody and harmony. Many African performances are highly polyphonic and made up of several layers of interlocking rhythmic ostinatos, which are combined to create an overall effect suitable for the religious or cultural ceremony for which the sounds are produced." This complexity is difficult to cater for when a Westerner or an African tries to represent African music on a score. Canonic imitation may occur in responsorial or antiphonal sections of African music as a result of the repetition of the first phrase or the introduction of new melodic material in the form of refrain.

Chernoff (1979) says that chordal relationships that occur as a result of polyphonic homophonic parallelism and homophonic polyphony found in African music are not always functional in the western musical sense. However, they accomplish a balance of tension release and dissonance consonance. In addition, they form varieties of chord combinations and clusters as well as varying levels of harmonic patterning. Chords are constructed from scales. Pentatonic and hexatonic scales are common scales across Africa. Anhemitonic scales, equal heptatonic scales and scales based on the selected use of partials are used in Africa as well. The same community can use different scale for a different set of instruments tuned to a certain scale for a different set of instruments or song type. This makes African music complex when it comes to notating it using Western notation systems. In traditional African music, scales are practiced and thought of as descending from top to bottom. African harmony is based on the scales being employed in a particular musical setting. Scales have a profound impact on the harmony

because Africans modalise their music. African music uses recurring harmonic reference points as a means of musical organisation.

Representing African music using Western notation systems is problematic. Looking at tempo, Sadie (1970) points out that there is a relationship between the measurable or objective time and the time that is experienced; the subjective time. There is a traditional distinction between the theoretical tempo that is implied in a score and the tempo that comes out of an African music performance. In this sense, it means Western notations can be biased since there is subjectivity in tempo representation. Although the score written by the composer is handled as a primary score, notation is typically considered to be a subjective assessment of the transcribers. Subjective assessments of tempo in music are determined by studying synchronisation with the pulse.

In Western music, there is a larger structure that is called the meter. Chernoff (1979) defines meter as a regular pattern of alternating strong and weak beats arranged in a specific hierarchical manner. According to this definition, the meter furnishes the musician with a hierarchy of reference points. Non-Western rhythmical phenomena are different from Western rhythmical phenomena. There is a problem of rhythmic identification of where to place the bar lines when notating African songs. Roads (1985) states that African music is not based on bars which define the meter but on pulsations, a succession of isochronous time units. Nketia (1974) emphasises that the Africans learn to play rhythms in patterns. Such a sentiment is echoed by Koetting (1970) who writes that African drummers do not think in terms of meter. Reimer (1989) dismisses meter outright by saying in African music only one thing matters, the periodic repetition of a single cell.

Shelemay (2008:24) discusses the "…indigenous technologies Africans employed to transmit and convey their own musics and the ways in which African musics have been transmitted and notated, primarily by outsiders, both within Africa and to a broader world." She notes that in some places such as Ethiopia where the *melekket* indigenous musical notation system exists, this written symbolism was only used to aid memory as musicians practiced zema chants. The *melekket* carries considerable information about the melodic and liturgical organisation of the Ethiopian Christian liturgy. Shelemay (1983) says that the indigenous notation systems do not give guide to a specific pitch and also leave room for the individual singer to reshape the basic music material according to contemporary and personal norms. To read the notation, a singer must know all the notational signs plus the melodies and the portions from which they derive. The *melekket* serves primarily as mnemonic aid during training or study. It is not a guide for the uninitiated. One

needs to have prior knowledge of the oral tradition. The notation system does not convey important aspects of the musical system and performance practice. Lack of notated rhythmic detail is a potential important omission and furthermore no written cues for drumming exist. A study of the relationship between dance motion and artistic icon has approved full consideration of indigenous African representations of music requiring a broader framework which may include other forms of the symbolic representation of music in and as performance. The notational system therefore emanates from, and refers to the process of oral transmission. She concludes that "In practice, Western presumptions of literacy constrain these definitions and locate considerations of representation primarily within written (or printed) technologies" (ibid).

Scholars should not only regard Western concepts of notation because this tends to overshadow alternative forms of musical representation. The Angolan *tusona* are graphic configurations of dots usually drawn with fingers on white pieces of sand, house walls and other objects and circumscribed by lines. The Ngangela-speaking people of Angola transcribe these lines on planes of white sand, house walls and other objects. The ideographs provide deep structures on the Ngangela cultural heritage. The Angolan artists who draw and use these sand ideographs have described them to function as mnemonic devices, which convey ideas about existing institutions, abstract logical thinking and aid meditation. It has been noted that Angolan musicians do not derive musical connotations from these ideographs but it has been argued that such a relationship between them and the music has been observed elsewhere in Uganda, Cameroon and Argentina (Kubik 1987). The documentation of path images of performances of *tayil* traced on the ground is also confirmed by Robertson (1979) as evidence that such forms of music notation exist elsewhere.

There is no regularity of rhythm which can be observed and therefore the periods must not be divided into measures since measures refer to certain regularities of rhythm. Shelemay (1983) puts across that rhythmic aspects of the Ethiopian chant tradition may be notated kinaesthetically, not tied to written records but traced in space by the musician in the act of performing. To achieve a fuller understanding of what maybe other representations of African music, scholars may need to move away from Western concepts of notation as music writing. Locke (1982) observes the Ewe call drum strokes by spoken syllables and vocables, constituting an oral notation. Because the scholars are working within the framework shaped by literacy, they tend to overlook alternative forms of musical representation in Africa. However, learning to play rhythms in patterns, repeating rhythmic cells and drumming without thinking in terms of meter are not activities that per se

necessarily produce rhythms that lack meter. In the absence of meter and time signatures, however readers have no way of judging the periodic or cyclical nature of the songs. If indeed there is a latent pulse that can be externalised in the form of hand claps, then it is likely there is an attendant periodicity as well, a primary periodicity that contrasts which emerges from asymmetrically arranged lines of the song text. Temperley (2000) thus reiterates that meter is implied in African rhythms but in an African way.

Both African and non-African music are human inventions and individual notes contain the same elements such as pitch, duration, timbre and intensity. Folk music such as work songs, lullabies, religious songs and war songs plays a similar role in most societies. The same categories of musical instruments are found in Africa as in Europe; namely stringed instruments, wind instruments and percussion. However, the African concept of music is totally different from the Western one. Traditional African musicians do not seek to combine sounds in a manner pleasing to the ear. Their aim is simply to express life in all its aspects through the medium of sound. The African musician does not merely attempt to imitate the nature by music, but reverses the procedure by taking natural sounds including spoken language and incorporate them into music. To the uninitiated this may result in cacophony but in fact each sound has a particular meaning. Stone (1985) attests to the difficulty of separating music from the cultural context and argues that isolation of musical sound proves a western abstraction of which people should be aware when approaching the study of performance in Africa. To be meaningful, African music ought to be studied within the context of African life.

The shift to writing down African music compromises the performance of African music and dance. Graceless singing styles implied by methods of song notation replace ornamented style by a more conservative style of performance. Nettl (1990) argues that transcribing music from oral/aural traditions negates the spirit of improvisation. The written text is far more prescriptive, specific and in a way limited when compared to the oral tradition. In the oral tradition there can be several renditions of the same song depending on the performer, for example *nhemamusasa* has different versions by Chioniso Maraire and Thomas Mapfumo derived from the traditional performance. Written text is a mere deterministic libretto, its unitary character providing enough signals to marshal the reader's activity quite strictly. The experience of a written work is thus relatively closely controlled by work itself. European transcribers sometimes alter the music which they deem defective in order for it to suit their means and needs. Agawu (2003) concurs with Nettl by saying that notating African music vitiates the strength and beauty of oral traditions and places written traditions as superior. Songs tend to

be forced to comply with Western musical idioms or stylistic writing. Koetting (1970) remarks that no method of transcription yet advised whether accomplished by means of the human ear or by electronic analysis mirrors the musical event with exactitude. The value of a transcription lies not only in its complete reproduction of all aspects of a musical event but in the fact that it facilitates the comparison of a number of individual and separable elements or aspects of the musical event. There's need to develop more suitable ways of transcribing African music because conventional transcription systems tend to fail to account for some melodic and rhythmic patterns.

Pitch organisation in the music of Sub Saharan Africa does not rely on a fixed theoretical framework. A large variety of scales are in use. Often the scales use intervals that do not conform to the European chromatic scale, for example the use of intervals around 240 cents in equidistant pentatonic scales. Standardised tuning systems or culture specific classification systems do not exist. In the 20th century in Western Classical music, Roads (1985) points out that so called interval vectors are used to express the intervallic content of a pitch class set. Using a Western chromatic scale interval vectors are limited to an array of six numbers expressing the amount of occurrences of each possible pitch interval. With a variety of intervals in African scales this reduction to six numbers is not possible. Nevertheless, creating a global view on the intervals that constitute the scale can give us interesting insights in the pitch structure of the music.

There are African musical instruments that are chromatic in tones. Arguably the West African Dundun Drum: the talking drum in Ghana, Nigeria and other west African countries are micro-tonal in sound. It is made and played in such a way that it can produce the tonal inflection of words. This unique micro-tonal pitch system is derived from the blending of African tonal language and the craftsmanship of fashioning the hour glass. Sadie (1970) confirms that the micro-tonic pitch system makes African melody subtle and can be disorienting to those accustomed to hearing performance of tempered scale that are fixed and standardised like the Westerners.

Another case in point is the performance of Zimbabwean marimba music by Europeans and Americans. In order to learn the lines some of them record the music on audio or video on devices such as tape recorders and video cameras. Because of their Western art music orientation, they attempt to notate the marimba music on score in staff notation. The transcriptions tend to alter some parts of the music to suit the Western notation system. The challenges that are encountered have been described as resulting from the complexity of the polyphonic marimba lines, but

Agawu (2003) has dismissed this complexity as an invented Western theory. In our view it is more positive to learn Zimbabwean marimba music through the oral tradition through which it is transmitted in the local culture from where it originates. Specifically, in African music idioms, several rhythmic tendencies are elevated as fundamental principles of music organisation. In discussing the rhythmic characteristics of African music as indicative of cultural orientation, one begins with an assumption that modes of participation and interaction in musical performances contexts can provide a model of sensibility that reflects broader patterns of perception and aesthetic purpose. There are major theoretical assumptions about African music that have emerged through discussion of music transcription. The concepts of timeline and downbeat Merriam (1981) have provided a background for all attempts to notate African music. Yet how Western notation represents African rhythm is often markedly similar whether the authors intent to identify and notate aspects of African rhythm according to non-African notions.

This assumption of cultural analogy is plausible in African musical idioms for several reasons. In African societies the extent of participation in music making is comparatively high and African musical activity is often described as participatory in nature. Instead of isolating performers and spectators African musical contexts exhibit a high degree of integration of spectators into the music making process. Many people who would merely listen within other cultural idioms are involved in African music through accompanying, handclapping, singing and the use of simple percussion instruments such as wood blocks or rattles. Also despite these notable exceptions, African music is primarily performed for dancing. Important parts of musical sound are frequently contributed by dancers who wear leg bells and leg rattles, strike castanets or attach other sounding devices to their bodies or clothing.

The predominant participatory mode of African music can be said to constitute a formal characteristic that takes precedence over other elements of musical organisation. In this regard therefore, aesthetic issues can be contextualised by functional concerns of communal cohesion. An absolutely true notation of music is impossible because of the lack of adequate signs in the current system of notation. Goodman (1985) says that written notation may suffice at representing the melody of a composition but is unable to convey deviations from standard pitch including compositional elements like vibrato, blue notes, bends and microtonal and intonational nuances. The aesthetic principles that make African music would reflect the manner in which the music has been institutionalised to provide frameworks for participation. The music is important to communal objectives of

bringing quality to social and cultural occasions. As such the modes of participation appropriate at musical events reflect people's concerns to achieve effectiveness considered in social as well as musical terms to see or present themselves at their best. The current understanding of these modes of participation is that they are based on a dominating rhythmic interrelationship and communication. Learning to participate in such contexts where music serves as an agent for the representation and socialisation of indigenous values contrasts with other types of pedagogy such as written discourse typical of much Western learning.

Furthermore, issues involved in the essentially participating dynamics of African rhythmic organisation can lead to a number of speculative directions. Among them are methodological questions regarding how one can investigate and discuss the significance of rhythms in social life. The essence of rhythm is repetition; the uniform recurrence of a pattern of sound. One may equally say that the timing of the repetition defines the rhythm or that the rhythm lies in coherence of its forward movement. African music has a well-known rhythmic priority and the use of rhythm in African music reflects several characteristics. The basis of these characteristics is a complex rhythm; polyrhythm. Sadie (1970) defines polyrhythm as a pattern in music when two or more rhythms go on at the same time. Few Western compositions match African polyphony in their intricacy. African rhythms are typified by hemiola and syncopation. Western music tends to rely on a single metric pulse unified on the downbeat, rhythmic movement is generally straight forward and is often articulated as an attribute of melody. African music tends toward multiple rhythmic lines defined in terms of one another. Frequently the rhythms have different starting points and different timing. While the rhythms of the West are divisive, African rhythms are often additive unequal sections. In polyphonic compositions two or three different additive rhythms are played simultaneously. As a result, those who are unfamiliar with a given piece are not clear about which particular rhythm defines the basic pulse of the music.

The inability to distinguish a rhythmic foundation results in alienation evidenced as the spirit of monotony. Syncopation and hemiola (the super imposition of complex additive rhythms and the relentless timeline determined by a metronome sense) combine to give African rhythms their characteristic drive. The cross rhythms or counter rhythms established in polyrhythmic music have perceptual implications which are different from the rhythmic effects of most Western music. The effect of multiple rhythmic lines has been described as the clash and conflict of rhythms in which the main pulse is obscured. Robert Kaufman (1980) noted these inadequacies when he said that norms in African music are described as rhythmic deviations (e.g. hemiola and syncopation). He suggests that African scholars should put

forward indigenous terminology to describe these concepts. Nzewi (1997) concurs on this inadequacy of music notations and points out that norms like hemiola in African music are described as rhythmic deviations by Westerners. In polyrhythmic contexts notions like syncopation and off-beat accentuation do not make sense. Instead of following a well-defined rhythmic or melodic line, a listener or participant has to find and put forward another rhythm that allows or requires him or her to make-and-add-a personal type of sense of what is already there. Rhythmic meaning is comprehended in the relationships of several rhythms. This orientation does not present difficulties to those who have been accustomed to such music. However, it involves a learning and experience.

In context a player concentrates on his own part of the ensemble, an orientation that has been called part playing. The separation of rhythmic parts occasionally makes the pulse subject to misinterpretation by someone unfamiliar with the particular idioms in potential cross-rhythm. The pulse cannot profitably be defined as the fastest common unit of time that can unite the various rhythms. Rather the main pulse is a simple duple time that represents the timing of the dance steps. African musicians often avoid sounding notes on this main pulse, in effect leaving room for the dancers to punctuate or anchor musical phrases conversely. The off-beat accentuation of percussive and melodic accents complements and responds to dance movements. This characteristic links the music to its participatory social context, bringing the dancers into the emergent rhythmic structure.

In Zimbabwe music and dance punctuate traditional genres such as *Amatshomane, Bira, Dandanda, Dinhe, Imbube, Isitshikitha, Katekwe, Mafuwe, Majukwa Mbakumba, Mbende, Mhande, Muchongoyo,* and *Tsotsa* as two sides of the same coin. While the dance may be used for entertainment, their dance primary focus is for a specific occasions to fulfil particular functions which include rain-making, births, deaths, coronation and other rituals. During these functions different members of the local communities assume specific roles. Instrumentalists play the drums while vocalists take up call and response singing roles. Dancers' participation can be open or limited depending on the dance. Every participant depends on and benefits from the other participants in one way or another in a reciprocal way. According to Cohen et al (2015) in many African cultures, music and dance are considered communal activities; the Western idea of sitting silently while a performance is taking place is an anathema to these traditions. Many musical techniques that are shared by African music seem to have arisen from this communal attitude towards music-making.

The performance that takes place during such dance functions cannot be fully represented through transcription which captures probably only the singing. According to Allen et al (2015: 56) "…those of us immersed in the Western musical tradition may be initially drawn to the vocal line as the most prominent feature, yet it may just be one element of a larger, complex musical texture…" which includes an astounding variety of instruments that are often combined with distinctive uses of the human voice. Obviously notation of such music omits certain important aspects which are an integral part of the performance.

Agawu (1995: 187) discusses the shortcomings of staff notation as well when he highlights

> …the apparent rigidities of Western notation. The idea that notes are "fixed" on the staff, and this somehow distorts the flexible African practice of sliding between the notes (or of singing quarter tones, for example) is undermined by the fact that within Western practice itself, in particular in the string and vocal repertoires of the eighteenth and nineteenth centuries, the note as represented and the note as heard are invariably different. One hears similar argument about the use of time signatures such as 3/4, 4/4, 6/8, and 12/8. In order to undermine the validity of Western conventions of meter in application to African materials, two assumptions are often made, both dubious. One is that there is a fixed hierarchy of beats in each bar, the other is that successive downbeats have comparable accentual strength as beginnings of groups.

We concur with Agawu on these points because not all tones sung by Africans are describable using staff notation. And African music performance is not guided by meter neither, but has a level of freedom and flexibility that is apparently uncharacteristic of Western music conventions of both music performance and representation. Agawu (ibid) notes that "The debate about ways in which African music is to be represented would be far more productive if we abandoned the search for who owns which representational mode and focussed more on the creativity exercised by African musicians in domesticating, or otherwise appropriating, the most alien modes of representation."

Hernly (2010:17) examined the effect of knowledge of music notation systems on music majors' transcription of West African drumming music and found out that "…participants who were trained in alternative music notation systems preferred them to Western notation…". This implies that music tutors need to carefully consider the impact of notation systems on the process of cultural transmission when teaching world music cultures. Hernly (ibid) concludes that:

> *Music educators should recognise the power of the lens of musical notation on their views of traditionally oral/aural world musics, and should discuss the impact of notation systems (as well as appropriateness of the use of notation overall) on the representation of these musics with their students. This presents an opportunity to teach them in a way that is global, concerned, reflexive, and sensitive."*

This study provides useful insight into the debate about the appropriateness of Western notation systems when it comes to representing musics that originate outside the Western music context. Allen et al (2015: 56) concur when they posit that while African musical traditions may sound different from each other, they tend to share both cultural and musical elements hence "…one must always be cautious when trying to view these traditions through a Western or aesthetic lens." Music scholars should conduct further research to further unpack this phenomenon.

Conclusion

The article has tried to demonstrate that trying to represent African music, which is participatory in nature, using western notational systems can be a daunting task. Quite a number of factors that hinge on the complexity African pitch and rhythm, and the reductionism brought by the music score which cannot represent the aesthetics of African music performance, have proven this true. The discussion notes that it is politically incorrect to superimpose the literacy tradition of the West over the African one which is largely an oral tradition. Though transcription serves as a memory guider and as a way of preserving the culture of African society, there is need for accuracy in representation. It has been revealed that written symbols are insufficient to represent African music as has been shown on the drumming part. Allen at al (2015: 56) note that "Nearly all African traditions have been passed down orally, and their study by Western scholars has often involved the transcription of performances into Western musical notation, which often proves woefully inadequate for the job." It has also been indicated that many events tend to occur at the same time and catering for this scenario using the scores is often problematic. Incoherence of the music caused by ever changing tempos, rhythms, textures and melodies has also contributed to making African music complex and difficult to portray on paper. The fact that there is subjectivity in perceiving a culture further clarifies the point that representing African music using Western notational systems is complicated.

Since the Western notational system has developed over the centuries to become a widely accepted, conventional, and sophisticated tool, it would be foolish to

discount Western notation systems because they are Western. It would also be disrespectful to African music not to use the best tool available. A lot needs to be done in an attempt to understand the organising principles of this music, how these principles relate to those of western music and what kind of notational system most likely reflects the music of an oral culture. Probably the solution still lies in what Seeger suggested six decades ago. We think transcription using Western notational systems should only be used to discover the musical cultural diversity of the world, not as a yardstick to measure musics. People would rather record African music and imitate it than learn it from notation as this does not fully represent an African performance, and use notation alongside the oral tradition. What percentage of a musical performance event ought to be transcribed has remained a critical question for ethnomusicologists. Staff notation has been described as inadequate for the purposes of representing African music. African music performance events entail a communal effort laced with functionality, song, dance and full participation. Agawu (1995) argues that even if African music transcriptions in staff by scholars such as Blacking, Jones, Nketia, Locke and Arom are not necessarily free from conceptual errors, they are still useful in their capacity to facilitate entry into the world of African musical art. To us this presents a yawning gap which is there for researchers to fill by proffering a system that is suitable to represent African music which does not entail such misconceptions and inadequacies. The continual (mis)representation of African music using Western notation systems should be viewed as inadequate and possible solutions should continue to be proffered.

Agawu (1995: 187) concludes that "...the idea that only indigenous African notational systems...can adequately represent African music must be fiercely resisted..." The fact that the invention or discovery of such indigenous African notational systems has not yet happened renders this a very valid point. African music scholars themselves are challenged to map out ways that would accurately represent their own music because none has come the fore with a solution. African musical scholarship has seen an unusual amount of activity in designing new systems of musical representation such as the TUBS and tablature. We view these as more on the reactionary than the evolutionary side as they did not evolve spontaneously from a systematic process. Looking back at the history of representing African rhythms, Agawu (1995: 187) is "...struck by the decidedly marginal role played by those who have sought to invent more adequate notations for African music." We feel that this kind of thinking tends to plunge the prospects of the emergence of new notations that will sidestep staff notation's inadequacies to represent African music and lead to its dumping by African music scholars into a ditch.

In this paper our argument is that the notation is not the music because performance is central to understanding many African musics, and therefore there is need for the consideration of constraints set by notation-dependent performance. For example, how does notation incorporate dance which is inextricably intertwined in many African music performances? Maybe there is a nomenclature issue for linguistic scholars to solve by coining one term that means African cultural music and dance. We strongly feel that what is written on the page/staff is at best but a bridge to performance and understanding the multiple meanings and aesthetics of African music which is usually collectively performed. Agawu refers to this phenomenon as originating "in a will to communal truth that is incorporative, generous, and inviting." We do not disavow the importance of notation, but attempt to point out its limitations as it does reduce the aesthetics of the performance.

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