

THEORY ON IDOLOR'S TECHNIQUE OF PENTATONIC VERTICAL HARMONY

Ofuani, Sunday

Department of Music,
Delta State University, Abraka, Nigeria.

ABSTRACT

It is normal practice to have pentatonic compositions or melodies harmonized in vertically diatonic major/minor chords. Upon this background, Emurobome Idolor sorted for an approach that could enhance pure-pentatonicism in every aspect of vertical harmony composition. This he achieved through logical techniques, which this researcher has named 'perfect-pentatonicism'. This paper is an analytical investigation and methodical approach into the pentatonic vertical harmony in part-writing technique that the originator adopted. The essence is to foster a pioneering theory of the technique so as to expose and popularize its compositional approach for wide-range application and further development by composers, theorists and researchers alike.

Keywords: Pentatonic; perfect-pentatonicism; vertical-harmony; part-writing; chord.

INTRODUCTION

Pentatonic scale is the tonal scale that consists of five-notes. Its major characteristic is omission of the fourth and seventh degrees of the diatonic major scale. So that semitone interval is ruled-out in it thus:



Pentatonic mode is perhaps one of the most prevalent tonalities in typical traditional African musical practices. For example, Phillips (1953): reveals that:

The songs of Yoruba people of Nigeria are mostly in pentatonic mode or scale. ...Yoruba [people] have no succession of scales yet. They have only the pentatonic to their credit, although at times some strange notes creep into their songs which might be regarded as a result of an instinctive feeling after variety and extension of embellishment (p. 9).

Ekwueme, (2004: 235) lists four scale types obtainable in the music of Igbo people of Nigeria and the second in the list is pentatonic. It is also extremely widespread and common in Scottish, Chinese, Indian, Japanese, American and other world musical cultures. To this,

Phillips (1953: 8) points out that “the music of all nations had at one time been on the pentatonic mode...” He buttressed this by citing Macdowell who states that:

In studying the music of different nations, we are confronted with one fact which seems to be part and parcel of almost every nationality, namely the constant recurrence of what is called the five-note (Pentatonic) scale. We find it in primitive forms of music all the world over, in China, and in Scotland, among the Burmese, and again in North America (p. 8).

Pentatonic modes have mostly favoured folk music among the world musical cultures that practise it. Vinton (2009) affirms this when he says that “musically, folk-song is characterized by the frequent use of the diatonic musical modes and the pentatonic scale; by purely melodic vocal lines, often un-adaptable to harmonic treatment.”

All the same, some contemporary composers have applied the scale system in their compositions; but not exactly in its vertical harmonic sense. Hence, it is almost a tradition to have a pentatonic melody wear harmony of diatonic major or minor tonality as its chord idioms. This is syntheses approach of diatonic-major or minor harmony to pentatonic melody. However, some others who attempted pure-pentatonic harmony adopted chord substitution method. But the problem of chord substitution method remains its limited triad, which prevails only two (the tonic and submediant) and this helped to discourage the approach. It is so, because actualizing triads of those that must involve the fourth and seventh degrees is fundamentally obscured in chord substitution system. For example, in creating triads with the notes of pentatonic scale its: supertonic triad must definitely lose its third (which is the fourth degree of the major scale); mediant triad loses its fifth; subdominant triad is totally ruled-out; dominant triad is equally without third and leading-note triad is out of it. Thus, the only chords that possess complete notes combination are its tonic and submediant.

Phillips (1953) suggests that:

Other ways to actualize pure-pentatonic harmony are fugal, canon, counterpoints and imitative devices. These can enable a pentatonic melody to be repeated, duplicated or inverted in different voice-parts and or in different ways, thereby achieving a kind of polyphonic harmony, yet having the pentatonic mode intact (p. 18).

This suggestion seems to abandon pure-pentatonic vertical or homophonic part-writing style.

Though, it is true that Debussy in *La Cathédrale engloutie* (for the piano), executed pure pentatonic vertical harmony (in F mode), but was only achieved through parallelism and duplications and not in the part-writing principles. Thus:



It is also true that Roussel in (the piano accompaniment to the vocal-solo) *Ode à un jeune gentilhomme* adopted rhythmic and harmonic alternations as a means of achieving pure-pentatonic harmony (in F mode); but essentially in linear progressions. Thus:

N'entrez pas, Mon-sieur, s'il vous

These traces of existing pentatonic harmony attempted to indicate that perfect realization of pure pentatonic harmony in vertical (part-writing) technique has not been approached through note-substitution chord and in its vertical or homophonic sense. Perhaps composers have not considered such technique of part-writing in pentatonic vertical harmony because they are satisfied with the syntheses approach of harmonizing pentatonic melody with diatonic-major or minor chord idioms; and the near general belief that pentatonic mode is only associated and viable for call and response singing, melody or unison-singing, folksongs and preliterate people. To this, Phillips (1953) points out that:

The pentatonic scales... are very simple, so simple indeed that we are tempted to look down on as crude and primitive. Yet not only are they complete in themselves but their very simplicity makes the music produce from them very appealing especially when free from that crudity that the very primitive people often associate with them, and when they bear the stamp of artistic touch (p. 12).

The above statement revealed that if this primitive (pentatonic) scale is exposed or subjected to spectacular artistic compositional advancement, it can help to free pentatonic tonality from its crudity and make it more appealing. Obviously, he also called for (harmonic) development of this immemorial (pentatonic) tonal scale type.

It is on this glaring pure-pentatonic vertical harmonic challenge that Emurobome Idolor¹ developed a means of composing and harmonizing pentatonic melody or tune in pure pentatonic vertical harmony through note-substitution approach – an experiment he applied to his choral compositions, one of which is *Glory Hallelujah to His Name* (EI 070)². The technique is what this paper refers to as *perfect-pentatonicism*. Through analysis of the choral work, the Idolor's *perfect-pentatonicism* procedure and its compositional application principles will be revealed not only to motivate composers' interest in composing pure-pentatonic works but also to advance the technique to the world's contemporary composers so that it can equally be utilized in their pentatonic compositions and arrangements.

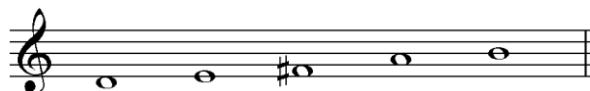
The *Glory Hallelujah to His Name* where the experiment was first applied was composed in D-major-pentatonic mode; so we shall use the same throughout this discourse. To facilitate

apt understanding of the technique, the first fourteen (14) bars of the work is analysed in *perfect-pentatonicism* chord and non-harmonic senses and attached as appendix.

Principle and Parameter of Pentatonic Chord Formulation

The procedure Idolor devised in formulating the chords of pentatonic scale is note-substitution method. Idolor (2001: 145) affirms this when he said that “I experimented, using the pentatonic scale for a four-part composition titled *Glory Hallelujah to His Name* in 1994. The melody and harmony of the music were drawn from the notes of the scale”. He, (2008) further reveals that “the melody and harmony (of his *Glory Hallelujah to His Name*) are entirely in the pentatonic scale; achieved through the use of note substitution.” The result is the actualization of seven different chords out of the five-note scale. Let us therefore consider these chords accordingly.

Pentatonic Tone Rows: To derive *perfect-pentatonicism* chords, the regular notes of the pentatonic scale are first of all considered. For example, D major pentatonic mode which Idolor used to experiment this art involved these notes: D-E-F#-A-B, represented thus:



Notice that in the scale, note combinations that amount to tonic triad or chord I (D-F#-A) of D major is completely available. So, each of these three notes becomes the starting point for each of the three pentatonic tone rows or modes. Diverse chords are eventually derived vertically after the subsequent note substitution. The illustration below shows the tone row modes without the substituted note(s) involved, thus:

Three staves of music, each labeled 'ROW 1', 'ROW 2', and 'ROW 3' on the left. Below the staves, the chords are labeled: Chord: I, II, III, IV, V, VI, VII. The notes are as follows:

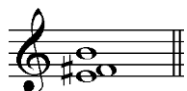
- ROW 1: D, E, F#, A, B, (vacant), (vacant)
- ROW 2: (vacant), F#, A, B, D, E, (vacant)
- ROW 3: A, B, D, E, F#, (vacant), (vacant)

The Row-1 started from the tonic note-D to E to F-sharp (omitted G) to A to B (and finally omitted C-sharp). Row-2 took-off from the mediant note-F-sharp (omitted G) to A to B (omitted C-sharp) to D and finally to E. The Row-3 started from the dominant note-A to B (omitted C-sharp) to D to E to F-sharp (and finally omitted G). In the tone rows, the vacant spaces are the positions for either the fourth or seventh degrees. They are avoided because they are not intervallic-note members in pentatonic scale. However, their positions are regularly left open in order to substitute them accordingly with other intervallic-note members of the scale after creating the three tone-rows. Notice that without the aid of note-substitution, the chords I and VI are completely achieved, while II, III, IV and V require at

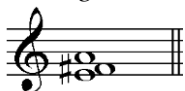
least one note-substitution to balance its chord. However, VII is waiting for two note-substitutions to make-up its chord.

Principle of Note Substitution: In this technique, note(s) required for substitution is derived based on *principles of lower or upper neighbouring note(s)*. For example, one of such principles demand that note(s) for substitution for the empty positions of the subdominant or/and leading-note (which are not members of the pentatonic scale,) is derived from any of the two immediate neighbouring notes below the note which its position is being considered for substitution. The chord numbers are not based on chord functionality nor triadic principle etc.; but just for nomenclature or identification purpose.

Chord II: The subdominant note which is not a member of the pentatonic scale is in chord II of this technique substituted with its immediate *lower-neighbouring notes*, which is the mediant note. Hence, the result of this chord idiom has its note combinations as: supertonic + mediant + submediant notes. Represented in the proposed key, thus:



Chord III: For the reason we already know, the leading-note is here omitted. So it requires at least a note to substitute it. Hence, the *second upper-neighbouring note* which is the supertonic substitutes the leading-note instead of the tonic. Reason being that to avoid duplication of chord I, the tonic note (which is the immediate upper-neighbouring note to the leading-note) is denied substitution in chord III. So it is transferred to the *second upper-neighbouring note*. Thus:



Otherwise re-arranged in this form:



Chord IV: Here, the subdominant note would have been simply substituted with its immediate *lower-neighbouring note* (which is the mediant,) but if it is so done, it becomes chord II. So it is shifted to the *second lower-neighbouring note* – that is the supertonic, thus:



Otherwise re-arranged as:



Chord V: In this chord, the leading-note is substituted with its immediate *lower neighbouring note*. Going by this, it utilizes the submediant note (which is its immediate *lower-neighbour*), thus:



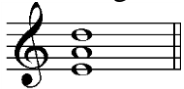
Re-arranged in this form:



Chord VII: In this system, chord VII is most affected by the omission of the subdominant and leading-note in the pentatonic scale. For this reason, both the subdominant and leading note are required to be substituted in line with the principles of *immediate upper neighbouring notes*. So that, the immediate neighbouring note above the leading-note (which is the tonic note) is required as principle to substitute the leading-note in this chord. While the neighbouring note above the subdominant note, (which is the dominant) substitutes the subdominant note. Thus:



Re-arranged in this form:



Generally, the tone rows with their diverse note substitution(s) (in black notes) prevail in its resultant chords, thus:

Chord: I II III IV V VI VII

Application of the Chords in Vertical Harmony Composition

Application of *perfect-pentatonicism* chords in composition of vertical harmony demands that *consecutive faults* should be avoided in its harmonic progressions. As to doubling of note(s), it is evident from the *Glory Hallelujah to His Name* that apart from the substituting note in a chord, any other note member of any chord was freely doubled. However, there are few points where substituting notes were doubled.

There are other aspects where *perfect-pentatonicism* did not agree with the conventional harmonic application principles. So, there are conventional part-writing principles that Idolor weakened and destabilized in his *Glory Hallelujah to His Name* in order to achieve the harmonic concept he conceived, which led him into formulating *perfect-pentatonicism* harmonic techniques. Such ingenious musical art that deviated from conventional style and technique of composition is what Demuth, Norman (n.d.: 11) appreciated and encouraged when he affirmed that a composer is distinguished if he/she succeeds in developing a personal compositional style and technique that challenges existing ones. He notes that:

The composer today has opportunities unheard of at the beginning of the century. The field is almost unlimited and he can adopt any style with which his ideas may come into line; but he may easily fall into a mixture of them. The way he expresses these ideas is his own particular hall-mark, his autograph by which he is known without reference to a programme or catalogue. (p. 11).

Idolor in his *Glory Hallelujah to His Name* adopted his personal pentatonic harmonic ideas by partly deviating and partly mixing his harmonic technique with the conventional vertical harmony principles.

Chord Inversion

In chords other than I and VI, every member of any chord is as important as the other. So, in whichever way inversion of a chord is perceived and projected; its chord number remains its name no matter the inversion. For example, there is nothing like chord II a, b, or c. Any note member of a chord can be the lowest sounding note (Bass). However, the manner chord inversion is applied in conventional harmony is still applicable to only chords I and VI of *perfect-pentatonicism*.

Principle of Third

All the notes in chords other than I and VI are approached freely and in that, any note could possibly be omitted or doubled in a chord. As the 'Principle of third' is almost irrelevant in *perfect-pentatonicism* harmony, its omission in a chord has no harmonic effect in this technique and so it is not a fault to omit it. Consider the application of the 3rd of a chord in the musical fragment (bar 5 to 7 of the *Glory Hallelujah to His Name*) below. Observe that apart from the chord I and VI, no other chords gave priority to any note as its 3rd. Thus:

Hal-le-lu-ja to His name.____
 Hal-le-lu-ja to His name.____
 Hal-le-lu-ja to His name, His name.
 Hal-le-lu-ja to His name.____

Chord: I III VI IV VI V

Chord Progression

The principle of chord progression is almost demolished in *perfect-pentatonicism*. In the *Glory Hallelujah to His Name* the weak (leap of the bass voice in intervals of 2^{nds} or 3^{rds}) chord progression types prevailed predominantly over the strong types (leap of the bass voice in intervals of 4^{ths} or 5^{ths}). However, the few chords in strong progressions constantly took place only at the points where chord V progressed to chord I (for example, bars 13 to 14; 21 to 22; 31 to 32; 32 to 33 and 100 to 101); points where chord VI progressed into chord IV (for example, bars 3 to 4 and 83 to 84) and once where chord III progressed to chord I (that is bar 93 to 94). For instance strong progression occurred at the last chord of bar 83 (chord VI with its bass note as B) that progressed into the first chord of bar 84 (chord IV with its bass note as E) a leap of (downward) perfect 5th. Thus:

The image shows a musical score for four voices: Soprano, Alto, Tenor, and Bass. The music is in 6/8 time and the key signature has one sharp (F#). The lyrics are "Glo-ry Hal-le-lu". The score shows two bars, 83 and 84. Below the staves, the chord progression is indicated as "Chord: VI ____ IV ____".

Other points where strong progressions occurred are: bar 7 – chord V with A as its bass which progressed to chord I in the next bar; bar 11 – chord VII with E as its bass which progressed to chord I with A as its bass; bar 13 – chord V with A as its bass which progressed to chord I at bar 14 – with D as its bass. Because the same progression pattern constantly occurred throughout the composition, it is therefore meet for this discourse to conclude that it is a principle in *perfect-pentatonicism* to apply strong progressions only when chord progress from: V to I; I to V and VI to IV. Every other progression is better approached in weak progressions. The reason is to subdue the inherent dissonance that may result due to the close proximity of note combination of *perfect-pentatonicism* chords.

Non-Harmonic Note

Although applying non-essential note in this technique could lead to unintended consonant chord idiom within the technique; however the principle of non-harmonic chord idioms has a place in *perfect-pentatonicism*. So where it is possible to achieve it without chord ambiguity; the same method but not the same content in which it is applied in the conventional major-minor part-writing harmonic principles is applicable. For example, at the last chord of bar 100 that led to the final cadence, the note D is not a member of chord V in this technique but it prevailed in the chord as non-harmonic called *anticipation*. The conventional principle of anticipation resolution is equally applicable here. So in the following bar (101) the same note (D) prevailed in chord I where it is a basic note member. Thus:

100 Anticipation 101

SOPRANO
Glo to His name.

ALTO
Glo to His name.

TENOR
Glo to His name.

BASS
Glo to His name.

Chord: V _____ I

Findings

In examining *perfect-pentatonicism*, it is realized that note combination in majority of its chord idioms suggest unresolved dissonant(s) or non-harmonic(s); but then, they are actually not in this case. Dissonant chords in conventional harmony can possibly become consonant chord in *perfect-pentatonicism*; these *consonant* chords are not approached and left or viewed according to the principles of non-harmonic notes or chords in conventional harmony. Of course, aural perceptions of some of these chords sound mysterious and therefore, merits discourse of its own. *Perfect-pentatonicism* has no rigid need for ‘third of a chord’. So, it may be almost irrelevant in this discourse. In fact, the ‘principle of 3rd’ is only felt in its chords I and VI, others do not actually recognize or depend on it. Doubling of note is done freely and it is usually applicable to only non-substituting notes (that is original chord member).

Conclusion and Recommendations

The theoretical and compositional approach and application of *perfect-pentatonicism* have been examined, but it is also essential to validate these theories with pragmatic performance attestation by concluding that aural perceptions of performances of *Glory Hallelujah to His Name* in this tendency, which this researcher listened to, confirmed that the technique is unique. The applause it received from the audience indicated that the technique is appealing, fulfilling and acceptable. Therefore, the technique is recommended to composers and arrangers for utilization and further development.

References

- Demuth, N. (n.d.). *A Course in Musical Composition*. New York: Bosworth & Co.
- Ekwueme, L. E. N. (2004). *Essays on the Theory of African Music*. Lagos: Lenaus Publishing.
- Idolor, E. (2001). Formal education and the development of African art music in Nigeria. In M. A. Omibiyi-Obidike (Ed.), *African Art Music in Nigeria*, 135-149. Lagos: Stirling-Horden Publishers.
- _____ (2008). *African Choral Series*. Vol. 1, Ibadan: Stirling-Horden Publishers.

Phillips, T. K. (1953). *Yoruba Music (Africa) Fusion of Speech and Music*. Johannesburg: African Music Society.

Vinton, J. "Song". Microsoft ® Encarta ® 2009 [DVD]. Redmond, WA: Microsoft Corporation, 2008.

The Composition under Reference

Idolor, E. (2008). "Glory Hallelujah to His Name (EI 070)." In Idolor, E. (Ed.) *African Choral Series*. Vol. 1, Ibadan: Stirling-Horden Publishers. 1-13.

One of the Performances of the Composition

'Delta Role Model/Delta at 20' Award-Giving Ceremony in the 'Nnebuisi hall', Grand Hotel, Asaba on the 26th of August, 2011. Conducted by: Emurobome Idolor.

Appendix 1.

Jubilante Africano Mus. Emurobome Idolor
(1955-); EI 070 (3/5/95)

Glory to His Name

Allegro (♩ = 105) *Appoggiatura; Stationary-note;* *Anticipation; Lower-Auxiliary; Anticipation*

SOPRANO
ALTO
TENOR
BASS

Chord: I III I VI IV I III VI IV VI V

8 *Appoggiatura;* *Escaped tone;* *Appoggiatura;* *Stationary-tone*

I II VI I IV III I VII I V VI II I V I

Suspension