DAHOMEY SUITE FOR OBOE AND PIANO

By
Mieczyslaw
Kolinski

Based
on
seven
documentary
Dahomey
songs

Mieczyslaw
Kolinski,
Piano
Lois
Wann,
Oboe

FOLKWAYS RECORDS FS 3855

Dahomey Mask / Cover design by Ronald Clyne

With
documentary
recordings
of:
DAHOMEY
BOULE
YORUBA
IBO
BULU
BAPENDE
WATUTSI
ZULU
BAMBUTI

FOLKWAYS FS 3855

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DESCRIPTIVE NOTES ARE INSIDE POCKET

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FOLKWAYS FS 3855

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Mieczyslaw Kolinski

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A Stylistic Experiment

I. Theoretical Evaluation

The term "experimental music" usually refers to a trend in contemporary music represented by a group of young composers who seek musical progress in exploiting recent achievements in the field of electro-acoustics and in exploring new concepts of sound relation and form. Less spectacular though no less challenging to the contemporary composer is another type of "experimental" music, namely, the facing of the problem of integration of stylistically quite heterogeneous non-Western patterns with the idiom of Western 20th century music.

In the present case an attempt has been made to blend the non-harmonic structure of West African Negro songs with the harmonic-polyphonic language of contemporary Western music. Is such an approach theoretically admissible and capable to expand the range of musical expression? A fruitful fusion of diverging styles is conceivable only if they have some basic features in common. When listening for the first time to a selection of authentic non-Western music, the impression prevails that these musical styles are completely opposed to Western ones, particularly in the case of certain vocal styles such as the Far Eastern ones or those of the majority of the American Indians. There the most striking trait is the entirely different vocal technique resulting in quite peculiar timbres sharply contrasted with the Western ones. Therefore, vocal technique, and the manner of singing in general, has been considered one of the most essential features of musical styles. Since the variety of timbres cannot be expressed through Western standard notation, the value of transcriptions of non-Western music has been questioned even though all inherent durational and pitch values might have been correctly indicated. This viewpoint is, however, not justified because it does not differentiate between traits that are structurally most essential and those that are most easily recognizable but structurally of secondary importance. The nationality of a soldier is most easily recognizable on account of his uniform but nobody would pretend that the uniform is one of the most essential features of a soldier. Similarly the recognition of certain timbres might prove quite helpful for the identification of musical styles though the change of timbre does not basically affect the structure of a piece of music. The melody of the American anthem remains the same regardless of the extent of opposition between vocal or instrumental timbres employed, while a similar drastic change of durational or pitch relations would completely alter the song. However, due to the pronounced conspicuousness of timbre, cultivation of vocal technique frequently constitutes a major concern of the performer. In fact, numberless professional Western singers are more interested in their voice quality than in the music they render, while the tribal musician often disguises his voice by means of special vocal techniques in order to influence or dominate supernatural forces, to please benevolent ones and to frighten or appease hostile ones.

Since timbre represents, so to say, only a "surface" quality, more essential elements of musical construction, such as melodic, tonal, metro-rhythmic and formal structure will have to serve as a basis for a comparative analysis of Western and non-Western patterns. With regard to African Negro Music E.M. von Hornbostel contended at the outset of his paper "African Negro Music" (Oxford 1928) that "African and (modern) European music are constructed on entirely different principles and, therefore, they cannot be fused into one, but only the one or the other can be used without compromise." Should Hornbostel's statement prove to be correct, the "Dahomey Suite" would be bound to remain a lifeless experiment without any musical justification. But a critical analysis of Hornbostel's paper discloses that the arguments in favor of his antithetic thesis cannot be maintained (Kolinski: Ethnomusicology, its Problems and Methods. Ethnomusicology Newsletter 10). Though music is far from being a universal language, some common basic principles of musical construction link the startling diversity of existing musical styles. A comparison between the fundamentals of Western and African tonal structures will exemplify the nature of this interrelationship. The Western tone system has frequently been considered as rather artificial on the ground that the division of the octave into twelve equal parts creates intervals that are throughout slightly out of tune. On the other hand, Helmholtz's ingenious attempt to derive the entire Western tone system from the natural laws of overtone relations is still widely accepted. However, neither of these two concepts does justice to the basic principles that have been instrumental in shaping the Western tone system. The introduction of the equal temperament has no doubt greatly stimulated the chromatic and modulatory trends of Western music but this innovation could not and did not mean to alter the nature of the system itself since the ear easily corrects the slight deviations from the "pure" tone relations. With regard to Helmholtz's theory Stumpf has proved that the Western tone system cannot be explained by the phenomenon of overtones because the latter could be altered or even completely eliminated without affecting consonance and tone affinity (Carl Stumpf: Tonpsychologie, Leipzig 1883 and 1890). However, whether the ratios contained in the overtone series determine consonance and tone affinity regardless of their actual occurrence as overtones, remains another question. The medieval concept of the Western tone system was based on the assumption that the so-called "Pythagorean" ratios constitute the physical equivalent of any musical tone relationship. This means that the basic intervals of the system were the octave and fifth from which all other intervals were derived. It was in fact the cycle of fifths which provided the twelve tones of the system. The gradual decline of modal music in favor of the dualistic major-minor concept prompted the theorists of the Renaissance period to reexamine the medieval ideas on the foundation of the tone system and to look for a theoretical justification of the new harmonic approach. This trend culminated in the work of Zarlino, the great Italian theorist of the late 16th century. His achievements not only revolutionized the millennial Pythagorean doctrine but had a decisive impact on the development of musical theory up to the present day. Zarlino distinguished two series of ratios of string lengths, the "divisione armonica" 1 : 1/2 : 1/3 : 1/4 : 1/5 : 1/6 and the "divisione aritmetica" 1:2:3:4:5:6, the former yielding a major chord, for example c^1 c^2 g^2 c^3 e^3 g^3, the latter a minor chord, for example g^3 g^2 c^2 g^1 e-flat^1 c^1. Thus the dualistic structure of post-medieval music with its characteristic major and minor chords seemed to be supported by a system of simple ratios. It is still taken for granted that the ratios contained in the arithmetical progression 1:2:3:4:5:6 etc. represent the physical equivalent of the phenomena of consonance and tone affinity. However, a reexamination of the problem revealed that the Pythagorean or "quintal" concept reflects the true nature of the psychophysical parallelism between musical intervals and simple ratios although this approach has been considered as erroneous for

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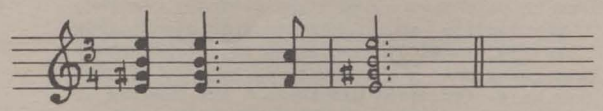
centuries; on the other hand, the "natural" concept of Zarlino, Rameau and other theorists proved to be a misconception despite the general acceptance of their basic ideas (Kolinski: Konsonanz als Grundlage einer neuen Akkordlehre. Prague 1936). One of the main arguments against the Phythagorean concept has been the seemingly high complexity of the Pythagorean ratios for the thirds (major third = 64:81, minor third = 27:32) compared with the seemingly quite simple "natural" ratios for the corresponding intervals (major third = 4:5, minor third = 5:6). The inclusion of the thirds among the perfect consonances called for a recognition of the "simple" ratios of the "natural" thirds and seemed to prove the fallaciousness of the "Pythagorean" system that implied such "complicated" ratios for highly consonant intervals. The degree of simplicity or complexity of a ratio is generally evaluated according to the size of the two figures involved; for example, the ratio 1:2 is obviously far simpler than the ratio 19:23. However, observation on the nature of interdependence between ratios and intervals has shown that the inner structure of the figures plays a decisive part in determining the degree of simplicity or complexity. Let us compare, for example, the ratios 1:17 and 1:64. According to the size of the figures employed the former interval should be far more consonant than the latter; but quite the contrary is true. Ratio 1:17 is a minor ninth enlarged by three octaves and, therefore, a pronounced dissonance, while ratio 1:64 is a sixfold octave and, therefore, a perfect consonance. Evidently the latter ratio is perceived as $1:2^6$ rather than as 1:64. When applying the same principle on the Pythagorean thirds 27:32 and 64:81, one arrives at the ratios $3^3:2^5$ for the minor and $2^6:3^4$ for the major third. These ratios are simpler than the "natural" ones in so far as the basic figures do not exceed the value of 3, contrary to the "natural" thirds which contain the value of 5 as basic element. Phono-photographic measurements of the actual size of intervals played by unaccompanied violinists (Greene; in Carl Seashore: Psychology of Music, New York 1938) supported the Pythagorean concept that had been postulated by the present writer (op. cit. 1936). Seashore stated: "Thus we reached the striking conclusion that the violinist, when unaccompanied, does not play consistently in either the tempered or the natural scale, but tends on the whole to conform with the Pythagorean scale in the intervals here studied" (p. 224). These experiments are certainly quite revealing; however, the validity of the Pythagorean concept cannot be proved merely by measuring the exact values of intervals employed. As a matter of fact, intonation is frequently quite flexible, in particular as far as solo singing is concerned. The crucial question is whether the degrees of consonance follow the order of the Pythagorean or that of the "natural" system. This question cannot be adequately answered unless the actual meaning of the ambiguous term "consonance" has been clarified. In fact one has to distinguish between "aesthetic," "functional" and "basic" consonance and dissonance. Most frequently the terms "consonant" and "dissonant" are used in the sense of "pleasing to the ear" or "satisfactory," and "disagreeable" or "shocking." Evidently such an "aesthetic" appreciation remains highly relative and subjective and largely varies according to style and individual taste, but above all the aesthetic approach does not touch the core of the problem; for example, theorists and musicians agree that a fifth is more consonant than a third though many people might prefer the sound of a third to that of a fifth. A similar ambiguity characterizes the "functional" approach. It contends that an interval or chord is dissonant or consonant according to whether or not it requires a resolution. But depending on its harmonic function the same interval or chord may or may not require a resolution and, therefore, be dissonant in one context and consonant in another one. Even the perfect consonance of a fifth might become a pronounced "functional" dissonance as in the following example:

Ex. 1



The nature of consonance and dissonance cannot be adequately conceived and formulated unless the fundamental tone qualities have been clearly established. Strange as it may seem, the most essential musical tone quality had not been recognized as such until rather recently. It is a well known fact that octave tones are identical in a certain respect. For example, all C's have a quality in common that distinguishes them from other tones. But none of the current qualifications of tone, such as pitch, timbre or intensity, applies to this phenomenon. The identity of octave tones is certainly not an identity of pitch; on the contrary, there is always a more or less considerable opposition in pitch between tones that are one or more octaves apart; on the other hand, octave identity persists no matter whether timbre and intensity are similar or contrasting. Since no appropriate name is available to denominate the quality that is identical in octave tones but distinct in other tone relations, it is suggested to term this quality tint. For example, all G's have an identical tint; the same is the case with all A's, all B's etc. However, G, A and B represent different tints. As a matter of fact, the Western tone system consists of a series of twelve different tints. Referring to concepts of Greek antiquity Stumpf linked consonance to the phenomenon of fusion (op. cit.). He contended that a simultaneous interval is all the more consonant the more it resembles a single tone. This approach brings us somewhat closer to the core of the problem. Rather independently of the aesthetic and functional concept of consonance theorists and musicians agree to give the octave the most prominent place in the gradation of consonant intervals. This evaluation seems to be in perfect agreement with Stumpf's concept since it evidently refers to the extremely high degree of fusion inherent to the octave, as well as to its resemblance to a single tone. Yet fusion as such does not constitute an appropriate criterion for consonance because there are several factors that influence fusion without altering the degree of consonance. For example, the fusion of a major third is greater than that of a major tenth though Stumpf himself emphasized that octave enlargements do not affect the degree of consonance; the fusion of a chord is greater when it is played on one instrument than when its tones are divided among instruments of contrasting timbre or when they come from different directions though neither timbre nor localization characterize consonance and dissonance; finally, Stumpf has proved that the acoustical phenomenon of beats (that is, periodical oscillations of intensity) has nothing to do with consonance and dissonance; however, the absence or presence of beats might considerably alter the degree of fusion.

The factor that contributes in the first place to the high degree of fusion of the octave and to its resemblance to a single tone is evidently its tint identity; this phenomenon is no doubt viewed when the highest degree of consonance is conferred to the octave. In other words, fusion depends on the interrelationship between various elements such as tint, pitch, timbre, beats and direction; however, fusion is characteristic of consonance only in so far as it is caused by tint identity or tint affinity. Hence, consonance is not fusion or homogeneousness in general but homogeneousness of tints; accordingly, dissonance is heterogeneousness of tints. This concept of consonance and dissonance might be termed basic, in contradistinction to the aesthetic and functional ones.

Owing to the limitations of the aesthetic and functional approaches only the basic concept is apt to serve as an objective principle for the grading of consonance. It has been pointed out that the particularly high degree of consonance of the octave is caused by the identity of tint. Among the intervals that are composed of two different tints the fifth and its inversion, the fourth, stand out as the most consonant ones. Evidently the high degree of tint homogenousness of the fifth and fourth is conditioned by the high degree of affinity between the two tints contained in these intervals. This means that two different tints have the greatest affinity

when they follow each other in the cycle of fifths. For example, F is most closely related to C, C to G, G to D and so forth. Consequently there is a second degree affinity between F and G as well as between C and D, a third degree affinity between C and A, etc. In other words, the degree of affinity between two tints depends on their distance in the cycle of fifths; therefore, the degree of consonance of an interval depends on the distance in the cycle of fifths between the two tints of which the interval is composed. Thus one arrives at the following classification of intervals with regard to their degree of consonance:

I. Octave (tint identity)

II. Fourth and fifth (1st degree tint affinity)

III. Major second and minor seventh (2nd degree tint affinity)

IV. Minor third and major sixth (3rd degree tint affinity)

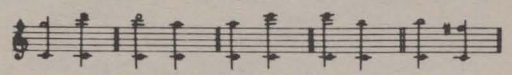
V. Major third and minor sixth (4th degree tint affinity)

There exists no tint affinity between tones separated by more than four steps in the cycle of fifths, that is, between the tones of the minor second, the major seventh and the tritone. As a matter of fact, the latter intervals have never been considered as consonant.

The above-mentioned Pythagorean classification of consonant intervals differs from the generally accepted one in two respects: the major second and its inversion, the minor seventh, are not only included within the group of consonant intervals but range even before the thirds and sixths; in addition, the minor third and major sixth precede the major third and minor sixth.

An analysis of the character of intervals shows that they follow the quintal principle of consonance grading and confirms, consequently, the validity of the Pythagorean concept. For example, when playing the following set of intervals

Ex. 2

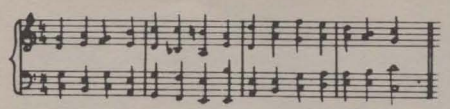


one first observes a gradual modification of their character going from the hollowness of CG to the brightness of CE: CD is less hollow than CG but not so colorful as CA; in turn, CA is more subdued than CE. This continuity is interrupted when proceeding from CE to CB and CF#, the latter two intervals sounding relatively harsh because of the heterogeneousness of their tints. A comparison of the inversions of these intervals, for example BE, BA, BD, BG, BC and BF, yields a similar picture. The intervals are given in octave enlargements in order to eliminate the effects of beats.

In accordance with these observations some medieval theorists conferred to the major second and minor seventh a higher degree of consonance than to the thirds and sixths, and to the minor third and major sixth a higher degree of consonance than to the major third and minor sixth. For example, Guido of Arezzo considered the major second as more consonant than the minor third, De Garlandia the minor seventh as more consonant than the minor sixth, Tunstede the major sixth as more consonant than the minor one and an anonymous theorist the minor third as more consonant than the major one (Hugo Riemann, Geschichte der Musiktheorie, Leipzig, 1922, pp. 77, 78, 116, 119, 121).

The Pythagorean concept is further corroborated by an analysis of the character of chords; there the laws of consonance are even more manifest than with regard to intervals. According to the Pythagorean principle the most consonant triads should be those formed by three tints adjacent in the cycle of fifths, such as DEA, DGA or DGC. Compared with other triads the hollow character of these chords most closely resembles that of the highly consonant fifth and fourth. The following phrase which exclusively consists of such chords clearly shows this specific quality:

Ex. 3



Since in traditional harmony these chords have been treated as functional dissonances, one might wonder whether past generations have failed to recognize their high degree of basic consonance. This, however, is by no means the case. One of the most prominent figures of 18th century music, Philipp Emanuel Bach, stated in his famous treatise "Versuch über die wahre Art das Klavier zu spielen:" "Der Sekundquintenakkord für sich klingt stets leer, er mag drei- oder vierstimmig sein. Die Auflösung erst macht ihn voll." (The five-two chord/for example CDG/ in itself always sounds empty, whether it is in three or four parts. Only the resolution makes it full). (Part II, Chapter 10, paragraph 5). In other words, this chord has been treated as functional dissonance because of its emptiness due to the high degree of basic consonance. For the same reason traditional harmony avoided the use of the fifth as closing sound.

A characteristic feature of 20th century harmony is the coordination of functional and basic consonance. (Kolinski; op. cit. 1936, pp. 19-42). For example, the aforementioned chord CDG and its inversion GCD have been frequently used as functional consonances, and in particular as closing chords, by Debussy, Hindemith, Honegger, Stravinsky, Prokofieff, Bartók and other composers. The usual interpretation of these harmonic structures as "unresolved suspensions" or "unresolved dissonances" is certainly besides the point.

It has been shown that the concepts on the nature of melodic and harmonic construction worked out by Renaissance theorists and developed up to the present time are erroneous and should be replaced by the medieval Pythagorean concept which during centuries has been considered as obsolete and incorrect. The Western tone system might, indeed, be termed natural though not in the commonly accepted sense of a realization of the ratios contained in the overtone series but because it represents the ultimate consequence of the natural phenomenon of tint identity and tint affinity. The twelve tones of the system constitute a projection of the cycle of fifths within the space of an octave and embrace, therefore, all direct and indirect tint relationships. The major and (natural) minor scales, the modes and medieval hexachords are projections of sections of the cycle of fifths; for example, the G major scale GABCDEF#G is projected from the cycle section CGDAEBF#. This is true no matter whether the intervals actually employed are "natural," tempered or Pythagorean or whether their intonation is more or less flexible.

Does the system of tint relations apply only to Western music or does it represent general laws of tonal construction valid for non-Western music as well? Supposing we knew nothing about non-Western music, it would be, nevertheless, safe to postulate universal validity of these rules because psycho-physical interrelationships between simple vibration ratios (or approximations to them) and specific tone sensations are deeply rooted in the constitution of brain and central nervous system which is basically similar for all populations. An analysis of the manifold non-Western musical styles confirms, indeed, this presumption. However, the thesis could hardly be tested by measurements of instrumental scales because the construction and tuning of musical instruments are sometimes based on mechanical or physical principles that are only partly, if at all, in agreement with sound psychological factors. In general the tonal structure of tribal vocal music has not been shaped after instrumental prototypes; therefore, its conformity with the laws of tint identity and tint affinity is particularly indicative of the universal validity of these rules (Kolinski: The Determinants of Tonal Construction in Tribal

Music. Musical Quarterly, Jan., 1957). The latter are clearly reflected in the tonal structure of the seven Dahomean songs on which the present Suite is based. Since the Western tone system originated from similar principles of tonal construction, it is well fit to integrate this African material and so to generate a new musical style. However, the task remains a very delicate one; for example, the use of conventional chord progressions such as I IV V I for the accompaniment of African songs represents a gross stilistic mistake that not only vulgarizes the original music but deprives it completely of its specific character without any aesthetic benefit. It is the particular flavor of the African songs themselves that has to serve as source of inspiration for their integration with the idiom of Western music. As a matter of fact, the language of 20th century music, evolving beyond the limitations of the dualistic major-minor concept, is far more apt to blend with non-Western patterns than, for instance, that of 19th century music. Moreover, a high degree of metro-rhythmic complexity is common to Western 20th century music and to many non-Western styles including that of Dahomean music.

II. The Dahomey and their Music

Before the French conquest in the late 19th century Dahomey had been a powerful kingdom ruled by a despotic native dynasty for almost three hundred years. It owed its prosperity to the huge benefits from the flourishing slave-trade with the two Americas and the islands of the Carribean. As a matter of fact, a great deal of the Negro population of the United States came from Dahomey, and essential features of Dahomean culture have survived in Haiti, the Guianas and elsewhere in the New World. The wealth of the royalty was concentrated in Abomey, the capital, where the king's treasures were massed in storehouses filled with gold, silver, brass figures and cloths. Here lived the kings and princes in vast compounds with walls decorated in bas-reliefs. Here, too, the most important and elaborate religious ceremonies as well as the sumptuous annual customs for the souls of the royal ancestors took place. Abomey was the political and cultural center of a remarkably well organized society. The trend toward complex organization is reflected in all facets of Dahomean life. There exist, for example, numerous associations for mutual self-help, such as the Dokpwe which is the strongest among these cooperative groups. To the Dahomean it is not a burden or a matter of mere necessity to belong to this organization; on the contrary, he enjoys and is proud of being a member of Dokpwe.

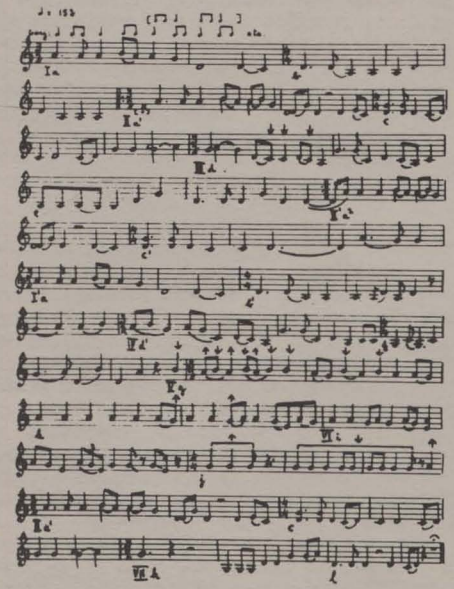
Music constitutes a vital part of Dahomean culture. A collection of more than 300 Dahomean songs recorded in 1931 by Melville and Frances Herskovits during their field-work and transcribed and analyzed by the present writer provides an impressive illustration of this fact. Within the secular group we find Dokpwe songs to work the fields, clear the land, dig or stamp earth, cut thatch, songs of victorious Dokpwe, hunter's songs, songs accompanying the weaver's, cloth-worker's and iron-worker's activities, songs performed by women while pounding meal in their mortars, songs of praise for a "best friend" who had proved loyal while the singer was in the French army (following Dahomean tradition every person must have a "best friend"), songs of "allusion" against an individual enemy or the members of a rival quarter or society, other songs of ridicule, insult or recrimination, songs offered at the Avoga social dances, lullabies, songs performed by children on such occasions as the loss of a first tooth, twin songs, songs accompanying stories, as well as songs of the various associations which extol their own worth and the aid they render their members. Another large portion of recordings are of ceremonial character, such as songs in praise of kings and chiefs or songs dealing with marriage, war, death and ancestral cult. In the latter cetegory belong the numerous ritual songs to the Tohwiyo, the founders of the Dahomean sibs. A Tohwiyo is supposed to be the son of one human parent and one supernatural one, usually an animal such as a horse, pig, toad or dog, while the Tohwiyo of the royal family was the son of a female leopard and the king of Adja. Finally, there is a great diversity of religious songs, and all pantheons, such as those of the sky-, earth-, thunder- and sea-gods are provided with various songs for the glorification and worship of these gods.

Dahomean music is essentially vocal, the use of instruments being generally limited to a rhythmic accompaniment of songs; this is true also of the reed zither which is never played alone. Wind instruments are represented by ivory trumpets and reed flutes. But by far the most important are the percussion instruments comprising the gong, the rattle and the drum. As in all West African cultures the latter constitutes the basic percussion instrument and exists in numerous types. Specific forms are used for each pantheon as well as for the ancestral cult and the social dances. The drums are frequently played in batteries of three or five, each drummer disposing of his own instrument. Generally the drums are of the usual African type; they are made of a hollowed-out log with a carved foot, its head of animal skin being attached to pegs inserted into the body of the drum below its upper end. The drums are played either by hand or by the use of one hand and a stick. An intricate technique enables the drummer to produce a variety of timbres and pitches on one single instrument. The most popular form of the rattle is played in pairs. Its body and handle is made of wicker-work and the wide open end is covered with a circular piece of raw-hide. The rattle is filled with pebbles and has a rather intensive sound. The iron gong is comprised within the usual percussion ensemble. Along with the more common single instruments there are paired gongs branched from one handle and alternately struck by the player, producing two different tones. In certain types of singing neither drums nor rattles may be employed so that the gong remains the only instrument to provide those songs with a rhythmic accompaniment.

III. Analysis of the Dahomean Songs used in the Suite

Two Dokpwe songs to work the fields, one funeral song, one song of allusion, two Tohwiyo cult songs and one story song have been selected from the aforementioned collection of Dahomean songs to serve as basis for the present Suite. The following music examples give this raw material as transcribed by the author from Herskovits' hitherto unpublished song collection. A glance at these songs will reveal the quite unprimitive refinement of their melodic, metro-rhythmic and formal structure, while a comparison of the songs with the corresponding movements of the Suite will show to what extent African elements have been retained and how they have been integrated with the idiom of Western 20th century music.

Ex. 4



First Dokpwe song to work the fields (compare with Side I, Band 1)

The song covers the range of a major tenth and the 6 tints employed form a continuous chain of fourths or fifths, that is, CGDAEB. D clearly stands out as tonal center, or "Tonic," while its upper fifth A constitutes a center of secondary importance that could be termed a melodic "Dominant." The scale/g a c D e g a b/ is peculiar in that the tints C and B, which are not directly related to one another, are used in an exclusive manner, that is, B and C do not form a semitone but are placed a major seventh apart. The variety of tone steps employed is remarkable. In addition to the intervals between two consecutive notes of the scale we find the following steps used in both directions: the third GB, the fourths GC, AD and DG, the fifths CG and DA, and the sixth DB; moreover, the third

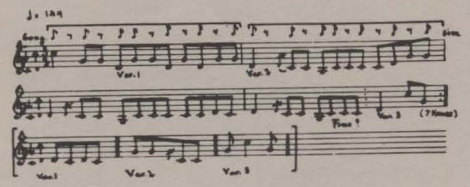
CE occurs downward and the fourth EA, the fifth GD and the seventh AG upward. This variety of intervals results in a richly organized melodic movement exploiting the possibilities of the wide range. Simultaneous fourths and major seconds are repeatedly used. A quite diversified rhythm is contained within a strict metric pattern alternating between a 3/2 and 4/4 meter. The majority of the 56 measures of the song show different rhythmic combinations. The relation between the main time values employed is 1:2:3:4:6:8. Several contrametric rhythms represent an effective contrast to the prevailingly commetric rhythmic structure (see, for example, measures 9, 14-15, 18-19, 23 and 27). The form of the song is remarkably elaborate and well balanced; each of its 12 sections comprises 24 metric units divided into two motives of equal length. The 12 beats of the first motive of each section are organized into 2 times 6, contrary to those of the second motive which are mostly subdivided into 3 times 4. In the following scheme the sections are marked by Roman numbers, the motives by small letters:

1.	I	a	b	7.	I^1 a b^1
2.	II	a^1	c	8.	IV d^1 f
3.	III	d	e	9.	V g h
4.	II	a^1	c	10.	VI i j
5.	III	d	e	11.	II a^1 c
6.	II^1	a^2	c^1	12.	VII k l

Motive a, along with its variants, stands out as main theme initiating half of the sections.

Throughout the Suite, the oboe plays the original songs without any substantial changes. The first movement is conceived as a duet performed by the oboe and the right hand part of the piano, while an essentially chordal accompaniment underlines its tonal and metric structure.

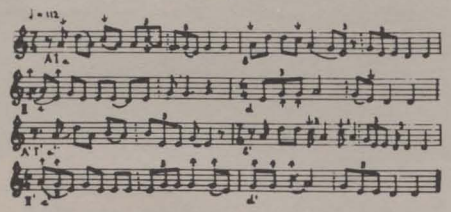
Ex. 5



Second Dokpwe song to work the fields
(compare with Side I, Band 2)

In spite of its wide tonal range of an eleventh the second Dokpwe song has a considerably simpler structure than the first one. The scale g C d g c, with the D slightly sharpened and the lower C slightly flattened, uses only the three consecutive tints CGD. C is tonal center, while D ranges second in functional importance. Two- to fivefold tone-reiterations, mainly on the tonic C, are frequent, but do not occur on the highest or lowest note. As a rule, the tone steps employed are the fourths and the second contained in the scale. The ascending fifth CG and double-fourth DC bridge the song sections. The slight alteration in the intonation of C and D might be interpreted as a trend to lessen the opposition between the large fourth skips and the small second steps. Various pendular movements characterize the melodic line. A 3/2 meter is maintained throughout the song which is composed of only four measures and repeated several times with slight variants. Each measure consists of a quarter note followed by a series of eighth notes; the latter are preceded by a grace note, except for the first measure. Only in one variant the quarter note is also subdivided. Another variant contains the only syncopation occurring in the otherwise strictly commetric song. The third and fourth measure are variants of the second one. The even rhythm of the song is challenged by a highly syncopated ostinato of the accompanying gong. In the corresponding movement of the Suite it is the piano that carries through these syncopations.

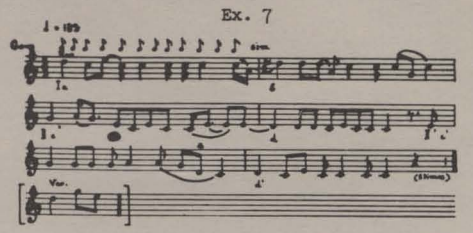
Ex. 6



Song sung as the body of a dead cult-follower
is prepared by priests for burial
(compare with Side I, Band 3)

The tonal structure of the song is based on the same tint complex CGDAEB as that of Dokpwe song No. 1; however, scale and mode are quite different. The range does not exceed one octave. In the scale D e g a b c d the lowest note D is tonal center and finalis, while its fifth A and fourth G are "Dominants", that is, secondary tonal centers. The semitone BC, though present in the scale, is not used as tone step; in fact, the B replaces in measure 5 the C of the initial measure. The fifth DA occurs as an ascending, the fifth EB as a descending tone step, while the fourths AD and EA are used in both directions. The metro-rhythmic structure is quite elaborate. The rhythm is made up of a variety of time values ranging from sixteenth to half notes including frequent eighth triplets. 7/4 and 6/4 meter are freely combined, the former belonging in the 4 plus 3 type. Each measure constitutes a motive the majority of which is terminated by two notes of equal pitch and duration. Two motives form one sections, two sections one stanza. Each of the four sections consists of a different metric combination, that is, 7 plus 7, 7 plus 6, 6 plus 7, and 6 plus 6. As a rule, the motives alternately end on the dominant G and the tonic D; in the second stanza, however, the G is replaced by the descending third GE. The range of the sections alternates between the octave DD and the lower fifth DA. The beginning of motive c is a metrically shifted transposition of motive a to the lower fourth. The texture of the corresponding movement of the Suite is preponderantly polyphonic.

Ex. 7



Song of allusion
(compare with Side I, Band 4)

The style of the song is somewhat reminiscent of that of American Negro Spirituals. The tonal structure is based on a complex of five consecutive tints, that is, CGDAE, from which the numerous and widely distributed "halftoneless-pentatonic" scales are derived (to use a generally accepted, though rather misleading, term). The tonal range is as wide as a twelfth. The scale C d e g a C d e g has C as tonic and G and D as dominants. Although the general trend of the melody is descending, the highest note G is reached only in one of the repeats of the song where the second note C is replaced by its upper fifth. A sixfold tone-reiteration on the upper C in the first measure and a fourfold one at the end underline the tonal center, while one of the two dominants appears at the beginning of each measure. It is characteristic that four intervals adjacent in the scale are connected by down-steps only, namely, the lower second DE, the higher second CD and both thirds EG, while the higher second DE is not used as a step. The other tones of the intervals employed are separated by one tone in the scale. The ascending fourth DG in the upper octave contrasts with the descending one in the lower octave, while the fourths GC and AD as well as the two thirds CE occur in both directions. Skips exceeding the seize of a fourth are avoided. A steady 3/2 meter is maintained throughout the song. The relation between the time values employed is 1:2:3:4:5 with 2 and 4 (that is, eighths and fourths) as predominant values. There is a well established balance between commetric and contrametric rhythms; the first measure contains two consecutive syncopations; here as well as in the 2nd, 5th and 6th measure a syncopation constitutes the second beat. The song is composed of three sections, each one comprising two motives; the third section is a variation of the second one. This yields the following scheme:

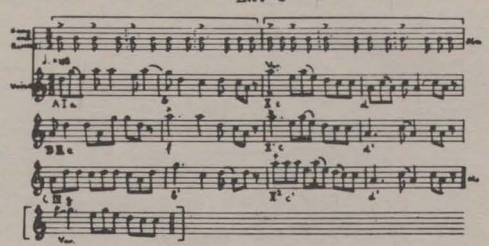
I	a	b
II	c	d
II^1	c^1	d^1

However, I and II^1 have in common the syncopations that are absent in II; moreover, the last motive d^1 represents a transposition of the initial motive a into the lower octave. The four motives a, b, c and d move within different sections of the range: motive a within the upper fifth A-E (or the upper seventh a-g), motive b within the fifth

G-D, motive c within the lower sixth C-A and motive d within the lower third C-E.

In the corresponding movement of the Suite the piano part of the first rendition of the song consists of a chordal accompaniment in half-notes stressing the metric pulsation. A gradual descent of the bass part through two octaves matches the smooth descent of the melody. In the second rendition the downward movement of the accompaniment is shifted to the upper register, while a pedal point in dotted whole notes brings out both the tonal center and the 3/2 meter. In the succeeding rendition the halfs are subdivided into a dotted rhythm related to the syncopated pattern of the song.

Ex. 8



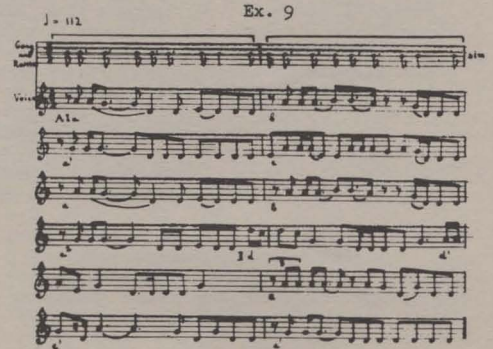
First Tohwiyo cult song
(compare with Side I, Band 5)

Though the tint complex CGDAE is the same as in the preceding song of allusion, the tonal and melodic structure of the Tohwiyo cult song is quite different. This time not C but A is the tonal center framing the octave scale A c d e g A. One could hardly single out one of the inner notes of the scale as "dominant", all of them having a more or less equally important structural function. There is a great variety of tone steps employed embracing almost every interval contained in the scale; however, the major third CE does not occur as a step. In both directions are used: the major second CD, the minor thirds AC and EG, the fourths AD, DG and EA, and the fifth DA; downward the major seconds DE and GA, and the fifth CG; upward the minor seventh AG, which has the function of a double fourth, and the octave AA, which links two adjacent motives. This diversity yields a very dynamic melodic line; in the course of the twelve measures of the song the melody oscillates not less than 9 times between the highest and lowest tone. Reiterations represent only 1/6 of the total amount of tone connections. The 9/8 meter is made up of 3 times 3/8, similar to the usual Western metric organization. The relation between the time values employed is 1:2:3:4:6 with 2, 4 and 6 (that is, eights, fourths and dotted fourths) as predominant values. The formal structure is remarkably balanced: each measure consists of one motive, each two motives form one section, each to sections one part. The second section of each part (II, II^1, II^2) is made up of the direct octave descent AEDCA connecting a three-member pendulum in the fourth EA with a seven- (or five-) member pendulum in the third AC. In motive c^2 (Var.) the fourth is replaced by the third EG. The descending trend of section II is contrasted with the arc-shaped structure of section III where the climax is shifted from the beginning of the first motive to that of the second one. The ascending fourth DG in motive is counterbalanced by the descending one in the succeeding motive, while the initial fourth AD in motives e and g constitutes a transposition by a fourth of the initial step of motive a. Dotted quarter notes occur only in the beginning of a motive and contribute, therefore, to bring out the formal structure. The latter can be summarized by the following chart:

A	I	a	b	B	III	e	f	C	IV	g	b^1
	II	c	d		II^1	c	d^1		II^2	c^1	d^1

The 9/8 meter of the song is combined with a percussion ostinato executed in a 3/2 meter by a gong and rattles. The tempo relation between voice and percussion is 3:2 so that each two 9/8 measures of the song exactly coincide with one 3/2 measure of the accompaniment. In the corresponding movement of the Suite this bimetric structure is divided between oboe and piano.

Ex. 9



Second Tohwiyo cult song
(compare with Side I, Band 6)

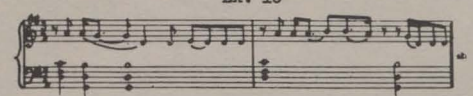
Similar to the first Tohwiyo cult song the scale of the second one comprises one octave; but while in the former case the melody oscillates throughout the whole range, the main melodic movement of the latter song is restricted to the lower sixth, the two highest notes C and D being used only in the beginning of the second part. Such a sudden rise in the course of the melody is, incidentally, quite characteristic of the song style of certain American Indians such as the Yuma. In the scale D e g a b c d the lowest note stands out as tonal center while its upper fifth A and fourth G have dominant function. We encountered the same scale in the aforementioned funeral song. In both cases the semitone BC contained in the scale is not used as a step. In addition to connections between notes adjacent in the scale the tone steps employed include the fourths DG and EA in both directions, the descending fourth GC and the ascending fifth DA and octave DD. In contrast to the first Tohwiyo cult song in which only 1/6 of tone connections were reiterations, the frequence of the latter is as high as 50%; more than half of them occur on the tonic. The meter is 3/2 as in the song of allusion. The rhythm is made up of a noticeable variety of time values; in addition to an eighth triplet characterized by an initial rest (measure 10) the rhythmic combinations comprise the following relations of time values: 1:2:3:4:5:6:7:8:10. An intricate contrametric rhythm is counterbalanced by simple commetric patterns such as reiterations of eighth notes occurring towards the end of several measures. Frequently measures start with a contrametric eighth rest for the voice which, however, is filled in by the first note of an ostinato pattern executed by a gong and rattles. Contrary to the first Tohwiyo song the meter of the ostinato corresponds to that of the vocal part. The ostinato is made up of three sections, each covering one beat. It has the form a a b, a consisting of a combination of 2 plus 3 plus 3 sixteenths, b of a usual syncopation. The rhythmic patterns of voice and percussion, though independent to a certain extent, are, nevertheless, closely related to one another. The song itself is divided into two distinct parts; the first one (I) comprises 7, the second one (II) five motives covering each one measure. Part I represents a strict rondo form with the initial motive a and its variants as main theme. A similar motive concludes also part II, giving formal unity to the song. In a succeeding repeat the 2nd, 4th and 5th motive are left out. Thus, the general structure of the song can be summarized as follows:

A	I	a	b_1	a^1	c_1	a_1	b	a^2
	II	d	d^1	e	e^1	a^1		

A^1	I^1	a	a^1_1	b	a^2_1
	II	d	d^1	e	e^1 a^1

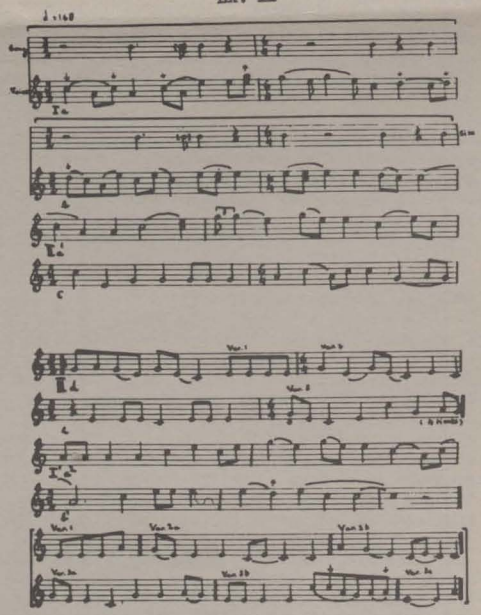
In the corresponding movement of the Suite the piano accompaniment underlines the metric and tonal structure of the song. It has been pointed out that the lowest tone D represents the tonal center while its upper fifth A and fourth G have dominant function. However, the average Western listener will be inclined to misinterpret these features in the sense of traditional Western harmony by reversing the relations between the three main notes; that is, he will consider the upper fourth as a harmonic tonic and the lowest note as "fifth degree". A similar approach might result in a harmonization like the following one which would completely deprive the melody of its particular flavor:

Ex. 10



To exclude such a misinterpretation, the upper fourth of the melody has been consistently avoided in the piano part, while the actual tonic has been maintained throughout the movement as a low pedal point.

Ex. 11



Story song
(compare with Side I, Band 7)

The song covers the same wide range of a twelfth, has the same tint complex CGDAE and belongs in the same "penta"-C-mode as the Song of Allusion. The scale c e g a C d e g also resembles that of the former song but differs in certain points: The lower D is left out instead of having dominant function, while the higher D is structurally unimportant; on the contrary, the higher G which in the former song occurred only once in a variant is frequently used throughout the song; moreover, the tonal center C is placed in the higher octave instead of gravitating towards the lower one. All tones adjacent in the scale, as well as the higher third CE, are connected with one another through more or less extended pendular movements. The sixth EC occurs in both directions, the fourth EA, the fifth AE and the lower fifth CG upward, and the fourth GC downward. The higher thirds CE and EG are occasionally sung simultaneously. The measures are of equal length, comprising six quarters each; however, their metrical structure alternates between 3 times 2, that is, 3/2, and 2 times 3, that is, 6/4. As a rule, each couple of measures has the structure 3/2 plus 6/4; in two instances, however, we find two consecutive 6/4 measures, and at the end of the song two consecutive 3/2 measures if the prolonged finalis is not taken into account. A gong ostinato extending over two measures each stresses the metric alternation. The song rhythm is essentially commetric. The relation between the time values is 1:2:4:6:10:12, in addition to an occasional eighth triplet consisting of an eighth and a quarter note: however, 98% of tones employed are either eights (time value 1) or quarters (time value 2). The elaborate formal structure is artfully balanced: Each two measures constitute one section, each two sections one part. The song consists of four parts. Part III is repeated four times with variants. The last part is a variation of the first one, while the first section of part II is a variation of the first section of part I. The parts and sections of the song are contrasted with one another by the use of different sections of the tonal range. Part I and the first section of II move within the upper seventh A-G. The first measure of the second section of II introduces the lower E by a descending sixth and the lower G by a fivefold reiteration. Part III and its variants move within the lower sixth C-A except for the higher C reached through an ascending sixth. In the last part the level rises again to the initial upper seventh A-G.

The tonal structure of the song suggests to the Western listener its interpretation as a melody based in the first place on broken chords; there is no doubt, however, that the song has been conceived as a purely melodic line without any harmonic implication in spite of the occasional occurrence of simultaneous thirds. Therefore, the piano part of the corresponding movement of the Suite has been treated in such a way as to preserve the dynamic linear qualities of the melody.

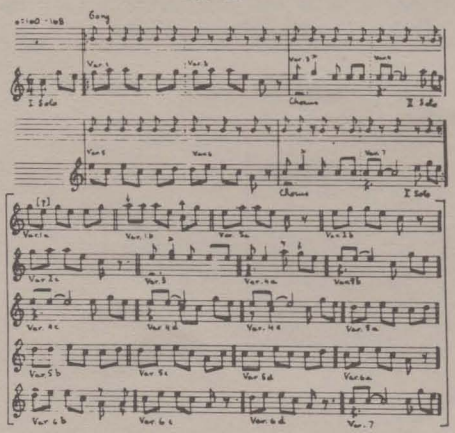
IV. Sampling of Recordings of African Music

Side II gives a sampling of authentic recordings of African music designed to provide adequate material for fruitful comparison with the Afro-European idiom of the Dahoney Suite.

Side II, Band 1: DAHONEY.

Male song accompanied by a gong.

Ex. 12



The song uses a favorite African pattern consisting of a regular alternation between leader and chorus; however, one solo-plus-chorus phrase constitutes only one half of the entire song while the other half is made up of another solo-plus-chorus phrase clearly differing from the first one in the choice of the tone complex employed. The complete tone material ACDEGA is the same as that of the first Tohwiyo cult song (see above), but this time the tonal center is shifted from A to C. G and E have "dominant" function so that the three main tones correspond to those of a Western major chord. D and low A occur only in the second leader-motive but there both notes are structurally important: The D is frequently placed on a metrically "strong" beat while the A functions as finalis. The motive comprises the whole tone material and descends smoothly from the highest to the lowest tone. Contrasting with this structure, the first leader-motive uses the tone complex CEGA with C as initial and final note. The tone material of both choral motives is confined to the minor third E-G (1st motive) and to the major third C-E (2nd motive). In either case the third represents the nucleous of the preceding leader-motive. The major seconds D-E and G-A, the minor thirds A-C and E-G, the major third C-E and the fourth E-A are employed in both directions, the major second C-D and the fifth C-G only upward. In addition to fivefold tone-reiterations occurring in both chorus-motives, the solo-motives are characterized by chains of twofold tone-reiterations each covering the second half of one beat and the first half of the following one. Similar, though less extended, reiterations are contained, for example, in the 1st measure of the 2nd Dokpwe song and in the 2nd measure of the Funeral song (see above). A more pronounced relationship between the song under analysis and the second Dokpwe song consists in that both have the length of four measures comprising 6 quarter notes each, but this time the measures are organized in 2 times 3 instead of 3 times 2 quarters. In either song chains of consecutive eighth notes are predominant. The leader-motives are made up of a series of 14 eighth notes; this rhythmic monotony is balanced in the chorus-motives by two other time values placed contrametrically: an accentuated quarter note and a final 5/8 note. The latter overlaps with the initial notes of the leader-motive, creating the simultaneous major third C-E and fifth C-G; occasionally the minor third E-G occurs on the syncopated quarter note (Var. 3). The accompanying gong plays an ostinato pattern comprising half of the song; its rhythmic structure underlines that of the vocal part.

Side II, Band 2: BAOULE.

Goli dance. The Baoule are now living in the Ivory Coast after being driven from the Gold Coast by the Ashanti in the early 18th Century. Religious and secular music play an equally important part. These two categories are, however, not used in a mutually exclusive sense, and all religious music may also serve as pure recreation. "Goli is perhaps the most ubiquitous of Baoule gods, and his dance is much favored. The god is represented by three types of masks....Music is provided by a chorus of men playing beaded gourds called towa, and by a large antilope horn called goli ahoue which produces a single low note....The dance is presented for social as well as ceremonial purposes, and after the god has appeared, women may join

the spectators to watch him dance. After the god has departed, both men and women will continue the dance for several hours" (Donald Thurow).

Side II, Band 3: YORUBA.

Male chorus with drum accompaniment. The Yoruba form a major kingdom in SW Nigeria with a population of three and a half million. Along with their neighbors, the Ibo, and the Dahomey they provided a substantial number of slaves for the New World, and survivals of Yoruba and Ibo culture can be found in various parts of the Americas, such as in Brazil, Haiti and Cuba.

Side II, Band 4: IBO.

Male voices with drum, sticks and sansas. The sansa is distributed throughout the whole African continent. It is a small instrument consisting of bamboo or metal keys of varying lengths fastened at one end to a sounding board, the other end left free to be plucked by the thumbs. The sound is sometimes amplified by a gourd resonator attached to the board. The sansa may be considered as the forerunner of the enlarged Cuban marimba.

Side II, Band 5: BULU

Dance song. The Bulu are a Fang-speaking tribe that inhabits the southern Cameroons. In Bulu music one and the same song might serve various purposes such as dancing, work or simply entertainment. However, certain adjustments are made to suit the specific situation in which the music is performed. In the present dance song a male leader alternates with a female chorus. The leader consistently sets in before the chorus ends; this yields a specifically African type of polyphony. The song is accompanied by an ensemble of drums, rattles and percussion sticks.

Side II, Band 6: BAPENDE

Xylophone. The Bapende are one of the numerous tribes of the Bantu group that make up the indigenous population of the western part of the Belgian Congo. "The Bapende xylophone is typical of West Africa. It consists of a number of flat wooden pieces mounted in parallel. These pieces are beaten with sticks with gummed heads. Underneath each key is a hollowed gourd which acts as an individual sounding chamber. The gourds are of different size, according to the tone of the wooden keys. On some occasions two men will sit on opposite sides of the xylophone to play together. More often each man plays a separate instrument" (L.A. Verwilghen). The male voices that join the xylophone toward the end of the piece are well integrated with the toccata-like instrumental pattern.

Side II, Band 7: WATUTSI

Warrior's song. The population of Ruanda, in east-central Africa, comprises three ethnic groups: the racially mixed Batwa "pygmies," the Bahutu who form the bulk of the population, and the Watutsi, a pastoral tribe who is supposed to have come from the north. The present warrior's song is accompanied by a harp played by the singer himself. An extended instrumental introduction preceds the song proper. The meter of the introduction which varies irregularly between 7/8, 2/4, 5/8 and 3/4 crystallizes into a strict 3/2 meter maintained throughout the whole song and the instrumental coda. The accompaniment of the song consists of a harp ostinato covering one 3/2 measure. The song has the scale Gagcdeg and its phrases generally move downward from the highest to the lowest tone. The major second GA, the minor thirds AC and EG, and the fourths AD, BE and DG occur only as descending steps. Though the minor second BC is comprised in the scale, no half step is employed in the song. The tempo is steady throughout the song proper but gradually increases during both the introduction and the coda.

Side II, Band 8: ZULU

Male chorus. The Zulu are a Bantu-speaking south-east African people living in Zululand, a restricted native territory in the province of Natal. This song follows the leader-chorus pattern with emphasis laid upon the chorus part. The introduction is rhythmically spoken rather than sung. The song proper consists of phrases comprising five 3/4 measures executed by the chorus and interspersed by short exclamatory leader-motives partly overlapping the chorus. Parallels in fourths are used frequently.

Side II, Band 9: BAMBUTI

Alima song. The bambuti Pygmies are the original inhabitants of the Ituri Forest, in the north-eastern section of the Belgian Congo. Their "music can be divided into five categories: two types of religious songs - those appropriate to the religious societies of the men and women, the Lusumba and the Alima respectively; two types associated with their main economic activities - hunting and gathering; and finally play songs. The Alima is held whenever a girl reaches the age of puberty. She learns the songs of the Alima, and on occasions appears in front of her hut...and sings while the young men form an admiring group nearby and chant the chorus (C.M. Turnbull)." This Alima song is performed by three girls and a group of young men and exemplifies a well organized polyphonic style mainly based on canonic imitations within a strict 4/4 meter. A similar polyphony is to be found in the music of other pygmies living as far apart as in southeast Asia (M. Kolinski: Die Musik der Primitivstämme auf Malaka und ihre Beziehungen zur samoanischen Musik. Anthropos 1930).

LITHO IN U.S.A.