

INDONESIA AND AFRICA: THE XYLOPHONE AS A CULTURE-INDICATOR

by

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This essay is an appeal to scholars of various disciplines to bring their knowledge to bear on a thesis which has arisen in the first place purely from musical evidence. While, therefore, we have to begin with musical considerations, it is hoped that this will not discourage the unmusical from reading on; for the subject raised by the music ranges far beyond that art.

It would need a whole book to elaborate the evidence in detail: in this essay we can but be brief. We hope, however, that those who are expert where we are not will confirm or confute what we have written, as the thesis here set forth seems to be important for Africa as a whole.

We start with the Xylophones of Africa. When Africans sing, whether in unison or in the simple harmonies of thirds, fourths or fifths, they use notes not dissimilar to those of our western major scale: that is, the octave of seven intervals containing five whole tones and two semitones. This might be called "nature's own scale", as it arises from the harmonics of a plucked string. But with xylophones the case is different. Hugh Tracey (1948, chap. 6) has shown that on the south-east coast of Africa (lat. 24° south) the Chopi xylophone orchestras use a seven-note scale in which there are no semitones. This equitonal scale, where each interval is just over three quarters of a whole tone, is a highly artificial one: it is quite an astonishing scale for anyone to use, let alone an African.

Now this scale also occurs in Siam (Duriyanga 1956, p. 40); all Siamese xylophones are tuned to it. At first blush this is not so very surprising as we already know of the Malayo-Polynesian peoples in Madagascar, sufficiently near Africa for a cross-influence to have taken place. An important fact should, however, be remembered, and that is that the xylophone, except in a very primitive form, is entirely absent from that island (Sachs 1938, p. 62). Sachs does not mention the fact that these primitive xylophones are exactly like those of Celebes. The writer is no champion of diffusionism and would accept a functionalist explanation if it were tenable. But we have to face a most significant fact which seems to rule out functionalism. The actual notes of the entire scale have, both in Siam and in the Chopi peoples, the same *pitch*.

A year ago a West African musician of the Malinke tribe brought his xylophone to us in London. The Malinke live behind the coasts of Portuguese and French Guinea and Liberia, round the headwaters of the Gambia River and of the Niger west of Bamako. We were rather staggered to find that it is tuned to this same equitonal scale, though the whole series of notes is exactly an octave higher than the Siamese pitch. To confirm the tuning we made oscillograms for each note, so there was no guesswork. Since then we have tested a tape recording of another Malinke xylophone, with the same result, except that this xylophone is not an octave higher but is at the same pitch as the Siamese xylophones.

The Javanese, great xylophone players, use two different scales, one of which is called *Pelog*. This scale with seven notes to the octave, is nowadays normally tuned with unequal intervals, but Jaap Kunst (1949, Vol. 2, Appendix 61) cites several examples where the scale is very near to that of Siam. Whether the Javanese formerly used an equitonal scale like that of Siam is still an open question: however, Kunst has tested the tuning of over a hundred xylophones from the Belgian Congo, and finds that the tuning is so near to that of Java that some influence which affected both areas must seemingly be postulated.

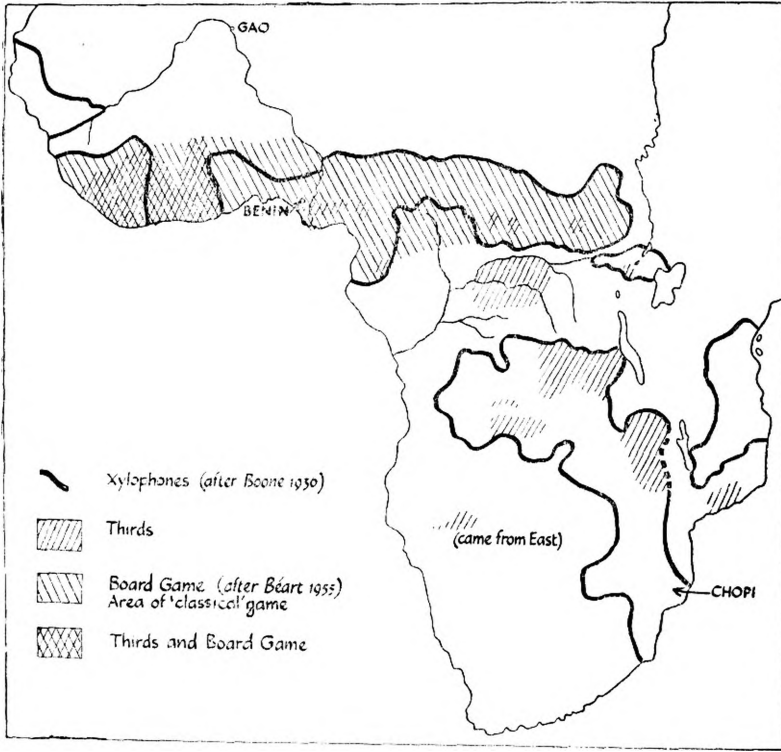


Fig. I.

The following table (Fig. II) shows the extraordinary sense of “perfect pitch” exhibited on both sides of the Indian Ocean. The Cambodian xylophone uses the Siamese tuning. Xylophone makers not infrequently add an extra note or two at the bottom or the top of the series of notes. For comparative purposes one thus has to choose the relevant note.

		No. of notes	Order	Pitch, v.p.s.	Note on a piano
East Africa	Chopi	19	lowest	184	F# below middle C + 1/4 semitone
W. Africa	Malinke 1	19	2nd	181	” ” ”
”	Malinke 2	17	lowest	179	” ” ” - 1/5 ”
Congo	Bakuba	17	4th	185.5	” ” ” + 1/4 ”
Indo-China	Cambodia	21	2nd	187.5	” ” ” + 1/2 ”

Fig. II.

Suppose, now, we take 184 vibrations per second as the mean pitch. A semitone above this would be 195 v.p.s. and a semitone below, 173 v.p.s. The degree of perfect pitch exhibited by these instruments is therefore quite astonishing. Functionalists might wish to argue that there is something in the nature of the materials or construction of the xylophone which necessitates this particular pitch. But this will not stand: Malinke I is tuned consistently an octave higher than the others, which means that physically and functionally it would have been possible to choose any pitch in this intervening octave on which to lay the scale, but the maker did not do so.

A much more searching test is to compare the intervals of a whole octave. In the table below, we have taken the octave of the Cambodian xylophone which starts on 346 v.p.s. and the octaves of the other instruments which start on the note nearest to 346 v.p.s. In order to make a valid comparison of the various degrees of the scale, we have reduced the bottom notes of all instruments to 346 v.p.s. and scaled their octaves accordingly.

	Cambodia		Java (Gamelan 25)		E. Africa Chopi		W. Africa Malinke 1		Malinke 2		Congo, Bakwesc (Boone 1936 p.133)		Theoretical equitonal scale
	v.p.s.	cents	v.p.s.	cents	v.p.s.	cents	v.p.s.	cents	v.p.s.	cents	v.p.s.	cents	cents
8ve	696		692		692		694		692		709		
	(657)→	186		174		174		160		174		153	171
7		625		626		626		633		626		649	176
		176		165		168		136		168		176	171
6		565		569		568		585		568		586	200
		185		196		176		211		156		200	171
5		507.5		508		513		518		519		522	193
		155		183		174		142		172		193	171
4		464		457		464		477		470		467	180
	(436)→	152		147		177		200		195		180	171
3		425		420		419		425		420		421	203
		178		133		169		156		178		203	171
2		383.5		389		380		388.5		379		374.5	173
		178		202		162		200		157		173	171
1		346		346		346		346		346		346	

Fig. III. Pelog tuning.

A semitone down or up from 383 v.p.s. (the second note) would be 360 and 406 v.p.s. respectively: similarly, a semitone from 626 v.p.s. (next to last note) would give 589 and 663 v.p.s. Now a semitone is the smallest interval we westerners recognize: yet we see how the divergence for every note of the scale is only a mere fraction of this small interval. Note also how artificial the scale is: the ordinary western major scale in Equal Temperament would have a note at the two places indicated. It would of course be easy to adduce other xylophone tunings which are not so near: but a close study of the available evidence should convince anyone that the above table represents the heart of the matter—in short, that the various makers were all aiming at laying the same un-Western scale at approximately the same actual pitch. When we reflect that those makers had no scientific instruments by which to regulate their tuning, is “staggering” too strong a word to express the degree of congruence? Can all this really be mere coincidence?

But this is not all. The Javanese have another series of xylophones tuned to a quite different scale called *slendro*. It is an artificial pentatonic scale not at all like those in the West. Its intervals are either equitonal or nearly so (Hood 1954, p. 138 seq.). Xylophones tuned to this scale form a regular class of instruments in the Belgian Congo (Boone 1936). A colleague recently brought a tape recording of a Malinke xylophone from the Ivory Coast direction in West Africa, which he saw at Dori, Upper Volta, French West Africa. Oscillograms reveal that it has exactly the same *slendro* tuning. The pitch of the *barang* or keynote of two modern Javanese *slendro* gamelans is given by Kunst as 268.5 and 272.5 v.p.s. respectively. The middle note of the Malinke *slendro* xylophone is 267 v.p.s.

The BaGanda in Uganda also tune their xylophones to this *slendro* scale.* Dr. Wachsmann (1957) actually witnessed the process carried out by the Kabaka's own xylophone maker and another of the royal musicians: the figures we give are based on his graph and tuning notes. The fifth note is approximately 284.5 v.p.s.

* See article "The Structure of Kiganda Xylophone Music", page 6.

Let us as we did before, set out a comparative table of West African, Congo and Javanese *slendro* xylophone tunings, having reduced their scales proportionately so as to conform to the same starting pitch (in fact the pitches are 258 for Congo and 258.5 for Java).

	Indonesia Java		Congo Ngbandi		W. Africa Malinke 3		Uganda BaGanda		Theoretical equitonal scale	
	v.p.s.	cents	v.p.s.	cents	v.p.s.	cents	v.p.s.	cents	v.p.s.	cents
5	457	240	453	211	469	255	467	233	465	240
4	398	222	401	225	405	228	407	270	405	240
3	350	222	352	260	355	234	350	242	352	240
2	308	247	303	219	310	259	304	225	307	240
1	267		267		267		267		267	

Fig. IV. Slendro tuning.

Now if one examines a map of the distribution of xylophones in Africa (Boone 1936, Pl. 13), it appears to show that the xylophone has established itself (a) on the East Coast opposite Madagascar and again between latitudes five and twelve degrees south, (b) inland over the lower Congo basin, and (c) on the West Coast along the shores of the Gulf of Guinea and in the south part of the Niger basin.

All these facts seem to point to one rather startling conclusion, that Indonesian influence has been present not only on the south-east coast of Africa but also in the Congo basin, Uganda, the Niger basin, and along the northern shores of the Gulf of Guinea.

The Africans south of the Sahara have in general two ways of singing simple harmony in their songs. Some tribes sing in parallel thirds: other tribes sing in fourths, fifths, or in octaves (unison). There are a few border-line cases where these traditions seem to be mixed, but normally a tribe which sings in thirds never sings in fourths, fifths or octaves, and *vice versa*. To the writer this has for years been a profound mystery. Why should we have in Africa these two discrete traditions? Yet a distribution map of harmony-singing turns out to be surprisingly similar to the xylophone map. The principle thirds areas lie along the north coast of the Gulf of Guinea; in a large part of the Congo basin; and on the east coast opposite Madagascar.

If now we turn to Indonesia the musical picture is confused first by Hindu and second by Muslim influence. Wherever these occur one finds unison and nothing but unison singing. But there exist pockets of an evidently older tradition and here one finds the same parallel thirds, for instance in Sumatra and notably in the Philippines. We find also in Polynesia a fondness for thirds, for example in Tonga Island, and we recall that they form part of the great Malayo-Polynesian language family stretching right across the eastern side of the Indian Ocean and on into the Pacific. We are not therefore surprised to find that in their really traditional songs the Sakalava, the Tankara, and the Tsimiheti tribes in Madagascar—to mention but the few of which we have evidence—who themselves belong to this same Malayo-Polynesian stock, sing in splendid parallel thirds. Now they sing these thirds in a manner indistinguishable from that of Africa. Is it unreasonable to entertain the possibility that Indonesian colonists are responsible for the thirds in Africa?

We adduce one more piece of musical material culture. There exists in West Africa, for example in Ghana, a curious percussion instrument made of iron. It is neither a bell nor a normal gong. Imagine a leaf six inches in length, with a stem,

the two sides curved up so as nearly to touch, forming a sort of tube. The end of the stem is bent to form a loop. This odd instrument is held in the palm of the hand and struck with a metal rod. Among the Ewe it is called *atoke*. An instrument exactly similar except that its handle is longer, and played in the same way, is found in Java, called a *kemanak** (Fig. V:1).

Thus the consistent evidence of the musical features points to one conclusion: that Indonesian colonists settled on the East Coast of Africa opposite Madagascar, in the southern part of the Congo basin and in Uganda, and in the lower basin of the Niger, including the northern shores of the Gulf of Guinea. Such a conclusion could hardly stand on musical evidence alone. We must test it at every point. So now we quit music and turn to other disciplines. Of course, we cannot hope in the nature of the case to find in Africa what a classical scholar would expect before he gave credence to such a theory, and that is documentary evidence. We have to consider other forms of witness. We have to ask whether it was physically possible, and if so, when? We might expect to find traces of linguistic evidence: are there any? We must further inquire whether there are any traces of material culture. And it is just in these fields that we appeal to the experts. All we can do here is to give a brief suggestive outline of what our investigations seem to hint at.

In the first thousand years of the Christian era many of the peoples living on the east side of the Indian Ocean were very great navigators. It is a mistake to think of this early shipping in terms of a canoe-culture like that of the Polynesians. For well over a thousand years before the first European explorers arrived in these waters, the local Indonesian peoples had developed, like the Chinese, large plank-built vessels capable of holding big cargoes and hundreds of people. Again, our natural pride in the prowess of our maritime discoverers tends to blind us to the fact that we were very late in breaking loose from "church steeple" navigation and taking to the high seas, and it is quite wrong to imagine that the Indonesian ships at the beginning of the Christian era were capable only of coast-wise sailing. They covered enormous distances including long stretches of navigation over the high seas.

The evidence for what we have said is well documented. A. H. Christie (1957), quoting Wan Chen who refers to Indonesian shipping in his account of the South during the Wu dynasty (A.D. 222-77), says, "This seems to indicate a vessel of about 170 feet overall, with a freeboard of some sixteen feet or more, though it is not clear what is included in height above the water". Again he says, "The large, non-Chinese merchantmen which were engaged upon the trade between East and West were known as *po*, or as *k'un-lun-po*, a crucial variant. They were crewed, most often, by men of *k'un-lun*, a term in use for various littoral peoples of South-east Asia and were sailing vessels. The earliest Chinese references appear to belong to the third century A.D., . . . but it does not seem unreasonable to suppose that the shipping which they describe . . . had been in existence for some considerable time".

In the eighth century A.D.: "Tchang Ye reports in his *Liang si kong* that "the great sea-going junks of Fou-nan (i.e. Khmer) which come from western Ind, sell (in China) mirrors . . ." (Ferrand 1919, p. 461). This is but one of the many passages quoted by Ferrand which leave no doubt in the mind as to the size, capacity, and seaworthiness of these Indonesian vessels which were used not only for trade but for war.

As to the distances travelled, Ferrand quotes *inter alia*, documents describing such voyages as the following: in A.D. 225, Cambodia to India and back, at least 3,000 miles each way; in A.D. 521, India to China, 3,300 miles as a minimum (Ferrand 1919, pp. 458-461). And, to bring the subject nearer to Africa, he quotes the Arab writer Ibn Al-Mujawir, who says, "a ship of Al-Komr (i.e. Madagascar) got to Aden

* See Book Reviews, page 78.

(directly) by this route in the year A.D. 1228-9. They set sail from Al-Komr destined for Kilwa but anchored, on the contrary, at Aden" (Ferrand 1919, p. 476). This would mean a non-stop voyage of 2,100 miles.

A. H. Christie gave us his opinion that in the early centuries A.D. Indonesian ships would have found no difficulty in sailing straight across the Indian Ocean. Moreover we have, of course, in the *Periplus*, documentary witness that the direct route (and not the coast one) across the Indian Ocean—the five thousand miles from, say, Java to Zanzibar—could be covered in hops of roughly of 1,200 miles *via* the Cocos Islands, the Chagos Islands, and the Seychelles. Most of this journey lies in the comparatively storm-free belt of the Indian Ocean. As to the possibility of their going on from, say, Madagascar round the Cape and up the west coast of Africa to the Gulf of Guinea, Commander Alan Villiers who has had much experience in Arab dhows, writes in a personal letter, "From a sailing point of view, it was much easier to come from the Indian Ocean with the favouring monsoon as far as it blows, and then pick up the favouring Agulhas Current which, if the weather were kind, might see a ship safely to the Cape. There, it is customary for southern winds to blow, which would bring a ship right along and she could certainly get to latitude ten degrees north without too great difficulty. She could almost do this by coasting, but to go back again would be a very different matter" (see also Villiers 1957). Whether they were able to return or not is immaterial to our thesis.

We understand that there is also evidence that some, at least, of the Indonesians proceeded coast-wise from Indonesia, *via* India and Arabia, settling and colonizing as they went, and proceeding in a series of westward hops. The truth may, perhaps, lie in a combination of both the direct and the indirect routes to Africa.

While the Malayo-Polynesian languages show a similar grammatical structure, vocabulary varies from area to area. If a word does not occur in, say, modern Malay, this does not mean that it was never there. It may well occur elsewhere firmly embedded in other languages of the same stock. For instance, while "gold" in Malay is *emas*, in Malagasy it is *vula-mena* (-*mena*=red; cf. Old Javanese *wura*, "bright", and *bhra*, "glittering"; compare also West African words for "gold" in Yoruba, *wura*; Wolof, *vurus*; Songhai, *oura*, Ibo, *ola-edo* in which *edo*="yellow"). Thus it is suggested that in evaluating any possible Indonesian language influence in Africa, linguists might well take cognizance, among other languages, of Malagasy and of Old Javanese.

Now what sort of influence might we expect? Is it likely to be a question of grammar or of vocabulary or of both? We have, as a matter of fact, a parallel situation which may shed light here, namely the linguistic effect of some 400 years of European influence in Africa. As is well known, Africar languages are strongly resistant to extraneous forces. Leaving aside the deliberate teaching of European languages in African schools, it is clear that on the whole, African vernaculars have not absorbed our western grammatical systems. What they have done is mainly to take over a number of nouns for which they have no equivalent. Among these nouns we find Africanized forms of the names of officers of Government, of coins, and of things in common use but new to the African. The phenomenon is observable as much in words of English origin as in those of Portuguese. In appealing to linguists to survey this Indonesian question we would submit that it might be specially profitable to investigate, as well as the names for kings, rulers, and terms of this category, the names for metals and the metallic adjectives like "glittering", "gleaming", "golden" etc., where we have noticed possible evidence of borrowing, and also the words connected with smelting. Bronze, gold and silver have been worked in Indonesia since ancient times. If these people came to Africa it would not be unnatural for them to seek metals, that prevailing incentive of many ancient peoples. We also suggest that the languages in the Gulf of Guinea area in particular, should be studied from the point of view of this essay. As the writer is not a

professional linguist, let us content ourselves merely with one or two examples of a musical or quasi-musical character.

The Adangme people in Ghana have a special form of song-words called *klama*. J. H. Nketia (1958, pp. 40-42) defines *klama* thus: "Considered as a body of musical texts, *klama* will be found to be all-embracing in its choice of subject, for there is appropriate *klama* for every social situation, e.g. expressing gratitude to a benefactor, retort, warning, counsel, society's structural relations, for festivals, cults . . ." "The wide range of *klama* makes it almost a life-time study".

In Java there are two forms of speech, *ngoko* the common speech, and *krama*, the polite form of ordinary speech used by the lower to the higher classes. A dictionary of Javanese gives both forms. *Krama* is always used for songs. Dr. Hookyas said to us, "You would never think of expressing so exalted a subject as a song in the low language . . ." Dr. Juynboll (1923) defines *krama* thus: "behaviour, conduct, bearing, demeanour, course of life, career, manner, the way it happened, description, manner of acting, nature, character, disposition, custom, habit, state, condition", and more besides. *Klama* in Ghana and *krama* in Java are virtually identical. Is this specific social usage mere coincidence?

Among the Yoruba in Nigeria there is a class of professional wandering minstrels who earn their living by singing spontaneous praises of a possible benefactor. There is an elaborate social use of these songs (Beier 1956, p.p. 23-8). They are called *oriki*. In Malagasy (Abina land Malzac 1930) *hōrika* (' = stress) is a noun meaning "cheering, outcry"; while the verb means "to cheer, applaud; to give vent to one's admiration".

One is tempted to mention the ancient West African empire of the Songhai (pronounced with a very close *o*), founded according to Talbot (1926, Vol. 1, p. 27) about A.D. 650, whose capital Gao or Gogo stands on the middle Niger. The word *sungai* is the ordinary Malay word for "river". In Malagasy, *gāona* (-*na* is a "silent" syllable) = "encounter, conflict": *vaa-gāona* = "dashed against". *Gogo* means "noise or turbulence of flowing water", and the town of Gao stands where the Niger flows fairly rapidly. Some ninety miles up-river from its present-day site are the rocky rapids of the "Seuil de Tosaye", where people still make a sacrifice to the "Isa holley"—the river genii—and must discard certain corals before crossing the rapids. Some 140 miles down-stream beyond Gao are the Laberanga rapids. But since, by itself, this type of evidence is not acceptable to linguists, we will draw a veil.

We will not press the point beyond saying that we are convinced that there is something in the field of language worth investigating. It may be all coincidence: but our own investigations suggest that it is not, and we should value the confirmation or denial resulting from a professional survey.

We do, of course, realise the difficulties inherent in such a survey, just as we realize the dangers of adducing, as we have done, merely a few similar words. Our only justification is that we could have produced many more, and that those we have chosen have a thought-content which seems to us to make it unlikely that the parallels are merely due to chance. Normally, proof of linguistic relationship is possible where early texts are extant. Unfortunately in Africa we have no written texts older than the sixteenth century, so that comparative linguistics is bound to be more or less hypothetical. In this situation what would make a relation probable would seem to rest on the sort of factors which in this particular case will be difficult to assess. We understand that the acceptable factors would at least have to ensure that the number of word-parallels is statistically high; that the nature of complexity of the parallels would rule out chance; and, if the influence has gone deeper than the loan-word level, that there are grammatical parallels. Even in the latter case, if the structure of both languages is simple—as, in

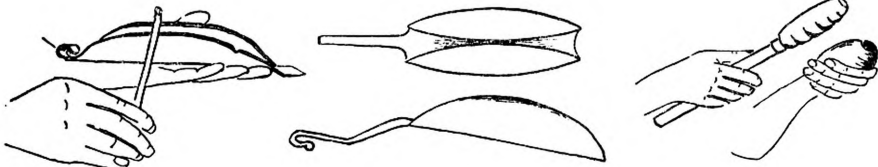


FIG 1 a. WEST AFRICA Atoke

b and c JAVA Kemanak (after J. Kats 1925)

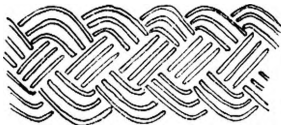
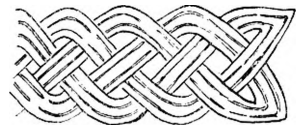


FIG 2 a. BENIN (after 'Traditional Art of British Colonies', R.A.I. 1949)



b CONGO (from photograph by courtesy of British Museum)



c SUMATRA (After Moonsonian Art-Exhibition Catalogue, Chicago 1949)



FIG 3 a. IFE Detail of Ritual Cap (from photograph by courtesy of the British Museum)



c. KHMER



b. Rose Lotus Bud (after Goodyear 1891)



FIG 4 a. BENIN (after Underwood 1949)



b. KHMER (after Coedès 1923)

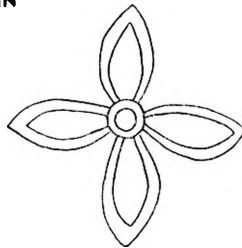
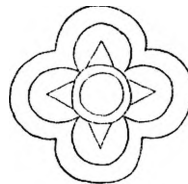


FIG 5 a. BENIN (after Underwood 1949)



b. MALAYA Tampok Manggis (after Singam 1954)

Fig. V.

fact, it is—it may be difficult to determine whether cross-influence has indeed been at work. However, it so happens that there does exist a well-known similarity of structure and type, between the West Sudanic language group and Malayo-Polynesian. On the whole it appears that while linguistic evidence by itself could not be conclusive, it might well turn out to be contributory. Or, to put it another way, our thesis might give

linguists a possible explanation for phenomena which might otherwise appear irrational.

Turning to material culture we will just take three examples, and first, the question of African decorative patterns. To one who has lived in Rhodesia, African decorative art is essentially two-dimensional, that is, it exists as flat patterns painted, burnt, or inscribed on the work. But the decorative art which fills our museums is often very three-dimensional, that is, it consists not only of length and breadth but also of the up- and down-ness to be seen in interlacing patterns of the guilloche type. These patterns very often take the form of a triple-ribbed strand passing over and under. To our mind this guilloche interlacing is a very great sophistication compared with the two dimensional flat patterns and leaves one wondering why some tribes have it and others do not. However, this three-dimensional art flourishes predominantly on the north of the Gulf of Guinea and its hinterland, and again in the Congo basin (Bushongo etc.), the very area which seems to postulate foreign incursion; and the three-ribbed guilloche can also be seen in Sumatra, Celebes and Timor. We are aware that the guilloche patterns occur in Greek and Roman art, but we would not give these peoples the credit of having taught the Indonesians.

The same sort of guilloche occurs on the Ife-Benin bronzes (Fig. V:2), about which we ask several questions (see Note for specific references). An interesting comparison of the detail of head ornaments may be made with the Khmer bronzes of Indo-China (Coedès 1923). It is not suggested that Khmer is the origin of Ife but we do ask whether it does not look as if Khmer is a tradition cognate with that which is exemplified at Ife—might it be Champa? The fluted and studded coronets, the flanged hats, the flat-topped hats, seem akin. Then there are the similar aigrettes (Fig. V:3). Are the Ife aigrettes emblems of the Rose Lotus (*Nelumbium speciosum*)? (Goodyear 1891, Fig. 10; cf. Fig. 2 where the bud is different) We see them in bud, and possibly in flower, and we compare them with the Khmer aigrettes. Again there is striking similarity in the forehead pendants which are attached to the coronets (Fig. V:4). One could go on to the costumes and anklets but space forbids. We merely ask, is there something here or not?

On many Ife-Benin plaques the background is filled with a floral diaper pattern (Fig. V:5). Is this, or is it not, possibly none other than a stylized Rose Lotus, one form of which, the *Tampok Manggis*, is shown by Singam (1954)? The essential geometry is the same: the many-petalled lotus is reduced to this:—two concentric circles in the centre, and four petals edged with double lines. That the Ife petals are pointed and the Malayan ones are rounded does not alter the fundamental similarity of stylization, and anyhow the example given is said by Singam to be only one form of the *Tampok Manggis*.

Ife and Benin are situated inland from the north coast of the Gulf of Guinea.

Our last example of material culture is the so-called "Board Game", where stones, shells or seeds are moved along a series of cup-like holes made in the ground or on a solid carved stand. The whole matter is discussed by Béart (1955, vol. 2, pp. 475-516) whose distribution map is germane to our thesis. The game occurs in a band of latitude roughly ten degrees north to ten degrees south, going from Malaya, Java, Sumatra, Borneo, etc., past the southern tip of India, the Maldive Islands, and Madagascar: it widens to include nearly all Africa, but in the north of the Gulf of Guinea and westwards along the northern edge of the Congo basin it is specially present: it reoccurs on the eastern seaboard of both North and South America, no doubt carried over by African slaves.

All the four chief names of the game given by Béart are paralleled in Malagasy, where the game is called *katra* or *katraka*:

Africa etc.		Malagasy	
Dahomey	{ ADI AJI	ADY	contest
Guiana		Ady lahy	dispute among equals for
Brazil			superiority (<i>lahy</i> a man)
Baule	AWELE	VELA (noun)	manner of playing <i>fanorona</i>
Senegambia etc.	{ WARI WURI etc.	VALY	reply, revenge
Antilles		Mivaly	to be paid back according to one's
Haiti			acts
Florida etc.			
Congo	-SOLO	TSÓLOTRA (-TRA is a "silent" syllable)	action of advancing and drawing
Rhodesia			back
		From same word:-	
		manolosolóra	carry often, sometimes forward,
			sometimes back
		mpanolosolóra	he who moves a thing forward

Fig. VI.

The Malagasy words are quite a good description of what the African form of the game actually is. Further, Béart considers that the words *wari*, *wuri* etc. are really variants of the Baoule word *awele*: if this is so, these words together cover the major part of the West African and Sudanese distribution of the game. If we are correct in equating *awele* with the Malagasy *vela*, then these areas all call the Board Game by the word which in Malagasy means "the manner of playing *Fanorona*". Now *Fanorona* is a sort of draughts played with sticks and stones etc., and has two main forms: "Three-hole" and "More-than-Three-hole" *fanorona*. Béart describes in detail both these forms in West Africa and among some Saharan tribes, the board being marked out as is often the case with the Board Game, by scooping out cup-like holes in the sand (Béart 1955, Chap. 18).

Again, what Béart calls the classical rules of the game have a similar and even wider distribution (see map, Fig. 1), and even where the rules of the popular form differ, the classical game is also known. The Indonesian rules are not the same, but the general conception of play, together with the coincidence of certain specific details in the rules lead Béart to conclude, "Convergence ou diffusion? Je ne crois pas qu'il soit possible d'imaginer qu'il y ait en convergence; dans les formes les plus éloignées il y a encore trop de similitudes. Il faut donc qu'il y ait en diffusion."

In looking at the map, one should note Béart's remark that the classical rules probably apply also to the Congo.

In short, the distribution of the game once more focuses attention first on Indonesia and then on the Gulf of Guinea and the Congo.

One ought to go on to adduce the evidence afforded by canoe construction and sails, but space forbids. We refer the reader to James Hornell's important article "Indonesian influence on East African culture" (1934). He shows, *inter alia*, that the big canoes far inland on Lake Victoria Nyanza are not African. "The whole method of caulking and other details are completely Indonesian." This information ties up with what we have already said about the Uganda xylophones.

Now if indeed there was a migration to Africa, are there any factors which would favour the selection of the Gulf of Guinea area and the Congo basin? We can imagine the Indonesians to have done what any colonists would be likely to do, namely, to

settle first where they could, and then in process of time, to gravitate to such areas as they found most congenial. We must look, then, at the evidence of physical geography. The temperatures in January and July for Java, and for the north coast of the Gulf of Guinea and Niger basin, the Congo basin, the East African coast from the Equator to twenty degrees south, and the top half of Madagascar are identical, as are the isobars. The mean annual rainfall is also identical. All these areas have a double season of rains. The mean annual cloudiness is almost the same, the Gulf of Guinea being slightly more cloudy. The ocean surface temperatures are identical. The latitudes of Java and the Congo basin are identical, while that of the north coast of the Gulf of Guinea is equal but opposite—seven and a half degrees north; compare Java, seven and a half degrees south. The altitude of Java on the coast is 0 to 600 feet, and inland, except for volcanoes, is 1,500 to 3,000 feet. The Gulf of Guinea area lies between 0 and 1,500 feet, and the Cameroons and Congo mostly 1,500 to 3,000 feet. Thus the altitude again is very similar. A map of world vegetation shows Java and these areas as virtually the same except for the absence of tropical forest on Java (though it is marked on Sumatra and Borneo). Finally we note the distribution of food crops. The map of rice areas gives Java, the coast areas of East Africa between three degrees and twenty-three degrees south, and the whole of Madagascar; and the coast of West Africa with a deep penetration inland on the north shores of the Gulf of Guinea. Note the emphasis on coast areas: does this suggest that it was brought by colonists? The rice map for Africa, with the exception of the Congo area, is similar to Olga Boone's map of the distribution of the xylophone.

Do not these geographical data indicate that if a migratory people wished to settle in conditions similar to those they left, and if those people were Indonesians, they could not have found more congenial areas in Africa than the north coast of the Gulf of Guinea and its hinterland, and the Congo basin? It was home from home: and these are the very areas repeatedly indicated by all the other evidence we have adduced.

If Indonesian influence did extend to Africa, at what date did it happen? That must be resolved by those better qualified than we are: but our impression is that it took place not later than about A.D. 750, and that it might well have occurred some centuries earlier. More than that we should not like to say at present.

The thesis we have propounded alters our perspective of Africa; it calls for a map with the Indian Ocean in the centre—a basin whose rim is Indonesia on the east, Madagascar in the south, and Africa on the west, all, to a greater or less extent, sharers in a common sphere of influence. The theory calls for the collaboration of scholars working all round this rim. Perhaps African studies have tended to be too much confined to Africa, though we believe other workers are now also looking tentatively at Indonesia. Let us all come into the open with evidence for or against. We would welcome discussion and criticism, but, as a musician, with one *caveat* , that those who would demolish the non-musical evidence must at the same time account for the musical phenomena if their argument is to stand.

Perhaps all this is mere coincidence: but if so, will someone tell us what has to be its coefficient of frequency before chance coincidence changes overnight to become positive evidence?

NOTE 1.

After this essay was written, the Editor (J.R.A.I.) pointed out that a similar conclusion was reached by Professor Hutton (1946). The latter bases his thesis on evidence quite different from ours, and is less specific both as to the possibility of such Indonesian colonization and also as to the areas of settlement. Thus the two essays are complementary.

NOTE 2.

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| Key | A Underwood 1949. |
| | B Murray and Willett 1958, Plate K. |
| | C Coedès 1923. |
| | D Fagg 1958, Plate A. |
| | E Singam 1954 (3rd Edition). |

- Guilloche* A, Plates 22, 34, 35, 38, 39, 40, 41, 42, 43, etc.
Coronets B, Pl. K, and A, Pl. 1 and 20, cf. C, Pl. 1 (2), 6 (3), 10, 19.
Flanged hats D, Pl. A (b and c) cf. C, Pl. 2, 6 (3), 34.
Flat-topped hats D, Pl. A (b and c) cf. C, Pl. 10 (1 and 3), 18.
Aigrettes:
Bud D, Pl. A (a, b, c); A, Pl. 1.
Flower A, Pl. 20. (The shape is a typical stylized Rose Lotus rosette.) cf. C, Pl. 6(3), 18.
Forehead pendants B; A, Pl. 56. There is a splendid undamaged terra cotta example in the recent finds at Ife, in the form of a ring. cf. C, Pl. 7.
'Lotus' diaper A, Pl. 50, 51, 54, 56, 59 (and a variant in 58). cf. E, p. 84 (c), and compare p. 85 (top left) where the petals are pointed.

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SOURCES FROM WHICH DRAWINGS WERE MADE

- Fig. V:1 b & c.* J. KATS 1923.
 2 a. *Traditional Art of the British Colonies—R.A.I. Exhibition*, 1949 Pl. 8.*
 b. From photograph supplied to me by the British Museum.
 c. From 'Indonesian Art'—*Loan Exhibition catalogue, The Art Institute of Chicago*, 1949, No. 261, p. 93*
 3 a. From photograph supplied to me by the British Museum.