

PHONOSEMANTIC ANTECEDENTS OF SOME VERBS IN IGBO

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Ideophones are phonosemantic entities and therefore are iconically transparent. As such they constitute a point of irregularity in the arbitrariness hypothesis. The rest of the lexicon is usually considered free of this transparency and therefore the legitimate area where mainstream investigation of language structures should begin. But it would be surprising if the rest of the lexicon contained no iconic strategies for representing meaning, considering the mnemonic and stabilizing value of iconic motivation for storing and retrieving the numerous lexical items in languages. This paper isolates some clear cases of verbs with phonosemantic antecedents in Igbo.

Les idéophones sont des entités phonosémantiques, donc iconiquement transparentes. Ainsi constituent-elles un point d'irrégularité dans l'hypothèse de l'arbitraire. Le reste du lexique est habituellement considéré exempt de cette transparence, et par conséquent, la zone légitime d'où l'investigation principale des structures de la langue devait commencer. Pourtant, ce serait surprenant que le reste du lexique ne contienne aucune stratégie iconique pour représenter la signification si l'on considère la valeur mnémonique et stabilisante de la motivation iconique dans la conservation et la récupération de nombreux articles lexiques de la langue. Cette étude éclaire quelques cas distincts de verbes en langue Igbo avec des antécédents phonosémantiques.

O. INTRODUCTION.

The majority of research papers on ideophones deal with their peculiarities -- either phonological (e.g. Childs, 1989a; Courtenay, 1976; Mphande & Rice, 1989), syntactic (e.g. Newman, 1968; Noss, 1985; Marivate, 1985), semantic (e.g. Awoyale, 1983-84) or phonosemantic (e.g. Maduka, 1982, 1983-84, 1988a; Kim, 1977). Only a few have focussed on their sources and destinations (e.g. Childs, 1989b; Jespersen, 1922).

Childs' (1989b) paper bears the title: 'Where do ideophones come from?' He states (p.1):

The title . . . poses two questions, the first of which we are incapable of answering in any but a general or highly speculative manner. The first question centers on the ultimate origin of ideophones. The second question asks, where do *new* ideophones come from once ideophones already exist in the language?

Addressed from a broad perspective, Childs' questions are straightforward, and the answers are simple! The ultimate origin of ideophones is gestural: the speech organs attempt to mimic the physical universe; and 'new' ideophones are created on the basis of a semi-generative schema that can be captured using appropriate rules and principles (Maduka, 1989). For details, however, many problems still stand in the way of a definitive answer and the work cited immediately above and a few others (e.g. Maduka, 1987, 1988a) attempt to resolve the problem.

Childs (1989b) pursues only the second question in his paper but posits that 'new' ideophones are created 'from other word classes, most notably, from verbs' and claims further that:

The two classes have always been seen as closely related, especially in the Benue-Congo. . . Although the directionality of the derivation is sometimes ambiguous . . . , in the majority of cases ideophones arise from verbs . . .

The author cites the following examples from Kisi (p.7):¹

laasi-laasi	id.	'stirred or mixed up, confused'
lãasia	vb.	'mix; play tricks, act foolishly'
hìngahìngàngndo	id.	'back and forth, in and out'
hìngndò	vb.	'revolve'

and claims that 'many ideophones seem to be the reduplicated forms of the verb with which they have close semantic associations'.

We take it to be axiomatic that ideophones are all -- at least partially -- iconically motivated (otherwise why are they called 'ideo-phones?') and that whatever cognates they may have in another form class must also be iconically motivated (or at least possess vestiges of the same iconic strategies). From this point, therefore, we assume that only two positions can possibly be maintained, viz:

- (1) ideophones and some verbs (or nouns and adjectives) are sourced simultaneously from phonosemantic primitives; or
- (2) some verbs (or nouns and adjectives) are sourced from ideophones which are sourced from phonosemantic primitives.

These statements clarify the position and solve the directionality issue (at least in principle) in cases where an ideophone happens to be cognate with a word in another form class. If any verb (or noun, etc.) leads to an ideophone (properly so-called), then that verb (or noun, etc.) must itself already be ideophonic (i.e. with iconic motivation). In other words, we may only talk of verbs (or nouns, etc.) that are cognate with certain ideophones, or certain verbs (or nouns, etc.) with phonosemantic antecedents.

We maintain this position, even though we may admit that processes such as lengthening and reduplication, including entirely arbitrary reduplicants, possess something of iconism. Reduplication is not a very important aspect of iconism in language and its sole application as a modification strategy cannot be said to lead to an ideophone, even when these strategies have semantic correspondences.

In this paper, we look at some ideophonic verbs in Igbo i.e. verbs with phonosemantic antecedents. The phonosemantic antecedents of words in other syntactic categories are not considered, through the precedence and primacy of phonosemantic primitives in all cases can easily be seen.

1. PHONOSEMANTIC ORIGINS OF IDEOPHONES.

1.1 It is obvious that ideophones are essentially phonosemantic entities, having a clear, strong, consistent and direct relationship between sound structure and semantic content. Paradoxically, though this should be clear, all manner of 'unidentifiable linguistic objects' have sometimes been called ideophones, including cult words used by masquerades in ritual exchange of greeting as well as expressive vocal noises (exclamations) for saying 'yes' and 'no' and for expressing surprise in Ibibio (Ekere, 1987). In the same way, nonce-words and nonsense words with no iconic motivation are sometimes included. In other words, items with unusual phonological patterns and which also sound playful or expressive are often considered to be ideophones, regardless of their motivational sources.

¹ High tones are unmarked, while Low tones are marked ` (for both Kisi and Igbo) in this paper. Falling tones in Kisi are marked ^.

The reason for this is simple: all these classes of words, like ideophones, often have unusual phones and phonotactic structure when compared with words in the regular part of the lexicon.

When we say that ideophones are phonosemantically motivated, we mean that for the meaning of each there should be a principled way -- if only minimal -- of stating the phonic motivation. We may not easily succeed in this endeavor in all cases, considering the extreme sophistication of the strategies available to ideophones for accomplishing phonosemantic communication. Nevertheless, phonosemantic sources must always be sought as much as possible.

1.2 PHONOSEMANTIC PRIMITIVES AND IDEOPHONIC COMPOSITION.

One of the principal assumptions of phonosemantics is that ideophones are composed, sometimes quite elaborately. That is to say that they contain 'submorphemic differentials' (Bolinger, 1965) or 'partials' as shown in recent years in Maduka (1983-84, 1988a, 1988b, 1989, among others). These partials or differentials have meanings of their own which together constitute the meaning of the whole ideophone.

In Igbo, most of this composition is done within the Type A format (Maduka, 1989) in which segmental elements -- consonants and vowels -- take specific and independent values, often depending on where they are in the structure, e.g. whether C_1 (initial consonants), or C_2 (consonant in the medial position). Tone melodies also take values.

We illustrate with a few examples using reduplicated ideophones with medial [k, g, r], the most frequently occurring C_2 consonants. The following subsections describe possible substitution values for consonants and vowels in the language.

1.2.1 Consonants.

The position of consonants is important with regard to the phonosemantic values that they take. C_1 consonants are often invariant in their meaning contribution, but C_2 consonants have wider, yet limited, meaning ranges. Below is something like a substitution table for the most frequently occurring consonants in the two positions:

<u>C_1 (Initial Consonant)</u>	<u>C_2 (Medial Consonant)</u>
y - soft, bunched-up mass	k - (a) short, high-pitched, sharp noise
ch - small, hard, light and numerous objects	(b) shaking, side-to-side motion
kp - hard, dry, and light object	(c) slow motion
f - very light object	(d) elastic soft
kw - broad-shaped object	g - (a) shaking, side-to-side motion
w - fluid/flowing mass, continuous space	(b) slow motion
k - very hard and light object	(c) very soft, low-pitched heavy, short, sharp noise
	(d) vertical
g - hard object	(e) elastic soft
m - ungraspable object	r - (a) flowing motion
j - (pejorative)	(b) soft continual sound
	(c) small
	(d) smooth
	(e) plastic soft

As stated, the C_1 consonants are in general invariant in their semantic content, while the C_2 consonants can have alternative values. The conditions governing the choice of alternatives are considered in Maduka (1989) and will not be discussed in any

great detail here.

Again, a k_1 (for instance) is not equivalent to a k_2 from the phonosemantic point of view since they have different values, as is evident from the table above. This appears not to hold in the case of plain onomatopoeia (which are less symbolically formalized -- being without reduplication, for instance). In onomatopoeia as opposed to plain sound ideophones, the positions of consonants appear not to matter: every consonant refers to noise in a quite direct way!

Finally, this compositional pattern is just one of a number of possibilities, including that (called Type B in Maduka, 1989) in which consonant melodies -- as opposed to units -- convey meaning (see Maduka, 1988a for clear examples in Nembe size and shape ideophones).

1.2.2 Vowels.

Vowels in Igbo ideophones are often identical and as such their positions need not be stated. However, in the few cases where there is a lack of identity, there is a general rule for determining the order of occurrence (see Maduka, forthcoming). For example, we may have **niganiga** 'slim and emaciated', **taritari** 'unpleasantly tiny', **chorichori**, 'unpleasantly small', **tikatika** 'light, struggling run', **katikatì** 'hard, irregular noise'; but not ***naginagi**, ***tiratira**, etc. even though at the level of phonosemantics, apophony (change in vowel quality) either way conveys pejoration (see also Maduka, 1982, 1983-84, 1986).

Thus, the difference in the meaning of the following sets of ideophones is just the inclusion of pejoration corresponding with apophony at the phonological level:

<u>neutral</u>		<u>depreciatory</u>	
niginigi	>	niganiga	'slim/tiny'
kpigikpigi	>	kpigakpiga	"
tiritiri	>	taritari	"
girigiri	>	garigari	"

However, for ease of exposition, let us assume that the vowels are all identical in the ideophones under focus in this paper and that these vowels occupy the V_1 position. The entries for Igbo vowels can then be stated as follows:

V_1 Vowels

i - (a) large (b) pejorative (c) dark

ĩ - (a) slim (b) tight (c) slipping out/slippery (d) swift. . .

e - (a) slow (b) light

a - (a) swift (b) broad (c) in open space (d) spreading. . .

o - (a) 3-dimensional (b) small (c) full (d) tight (e) in closed container

o - (a) 3-dimensional (b) large (c) empty (d) loose (e) in closed container

u - (a) 3-dimensional (b) small (c) full (d) tight (e) round (f) slipping out/slippery (g) (in) closed container

u - (a) 3-dimensional (b) large (c) empty (d) loose (e) round (f) (in) closed container

These entries refer to separate meanings the units can take as phonosemantic entities. The meanings are not all entirely independent and non-concurrent. For example, the terms 'loose' and 'empty' are somewhat related, and those referring to size (e.g. 'small') and shape (e.g. 'round') are often concurrent because of the cognitive affinity existing between these two sub-fields.

1.2.3 Other Psychomorphs.

Other meaning-bearing 'units' also exist, such as tone melody and reduplication. These also participate in meaning production and also contain primitives that are independently selectable. The most outstanding of these include a polarized tonal melody (e.g. HL, LH, LLHH), a sequence of low tones (LQ: LL, LLL, LLLL), and reduplication. These contain the following primitives:

T_Q(Tonal polarization) - (a) irregular noise (b) irregular shape (c) unsteady motion (d) pejorative

L_Q - (a) soft (b) low pitched

DUPLICATION - (a) repetitive (b) fixed/steady state

Once again, the choice of appropriate primitives depends on contextualizing circumstances. For instance, in the case of DUPLICATION, the first (repetition) would be chosen if activity or noise is referred to; while the second (steady state) would be chosen for state.

1.2.4 Ideophonic Composition.

The following ideophones illustrate the nature of compositionality in ideophones of the type under consideration. yokoyok_o, kpokokopok_o, chokochok_o have the following compositional structure:

(a) yokoyok_o

y ₁	o	k ₂	(o)	DUPLICATION	H _Q
BUNCH	IN FULL, CLOSED CONTAINER	SHORT, SHARP LIGHT NOISE		REPETITIVE	HIGH- PITCHED

(b) kpokokopok_o

kp ₁	o	k ₂	(o)	DUPLICATION	H _Q
HARD, LIGHT DRY	(as above)	(as above)		(as above)	(as above)

(c) chokochok_o

ch ₁	o	k ₂	(o)	DUPLICATION	H _Q
SMALL, HARD, DRY, NUMEROUS LIGHT	(as above)	(as above)		(as above)	(as above)

For the ultimate interpretation, not much need be said except for the illustrative fact that in English, the following holds:

[SHORT, SHARP, LIGHT NOISE] + [REPETITIVE] = RATTLE

In other words, the ideophone yokoyok_o would mean 'high-pitched rattling by bunched-up mass in full (compact) container/vessel'. These and other matters have been discussed in several places by this author; the next issue is to relate all this to verbs in the language, and in particular how some of them have been derived phonosemantically.

2. VERBS WITH PHONOSEMANTIC ANTECEDENTS.

2.1 VERBS AND IDEOPHONES.

Whereas ideophones are phonosemantically defined (see section 1) , verbs are, like other form classes, defined through composition, distribution, and function. Igbo verbs can go into composition with bound forms, including prefixes indicating the infinitive, and suffixes indicating aspect. Igbo verbs can also undergo reduplication (with prefixation) to derive such forms as gerundives. These are just some of the patterns of composition which determine a verb in Igbo.

By way of distribution, Igbo verbs occur immediately after nouns, pronouns or nominals in general. Functionally, Igbo verbs serve to convey predication (as opposed to modification).

Igbo ideophones -- unlike verbs -- do not enter into category-preserving affixal composition, even though they can sometimes be the input into the derivation process through prefixation of nouns. Igbo ideophones vary widely in their distributional patterns, standing in nominal position (e.g. *bèlèbèlè* 'soft'), adverbial position (e.g. *fiàm* 'in a flash'), and pro-verbal position (e.g. *frrr gbìm* 'unfettered fall resulting in a heavy sound'), as in:

o sị n'elu frrr gbìm nà àlà
it/(s)he appear from top frrr gbìm to ground
'it made a free, unfettered fall hitting the ground with a heavy sound'

This may be compared with:

o sị n'elu dāa nà àlà
it/(s)he appear from top (and) fell to ground

in which *dāa* 'fall' replaces the ideophone in the earlier sentence.

In other words, ideophones cannot be defined like verbs using distribution as a parameter (see Maduka, forthcoming, for an extended discussion).

Igbo ideophones -- whose content is always descriptive -- often, though not always, modify statements. In brief, ideophones serve a descriptive function, which is their only purpose in language.

In conclusion, we state that 'verb' is a grammatical category while 'ideophone' is a phonosemantic category. Nothing in principle prevents verbs from sharing in the phonosemantics of ideophones or ideophones from sharing in the grammatical characteristics of verbs. The differences between the bases for distinguishing verbs from ideophones make it difficult to establish these terms with exactness. It appears convenient in the circumstances to name as ideophones those lexical forms that are iconically motivated and structurally fairly fully developed (see Section 1) and which do not systematically share the strategies for modification of verbs (through suffixation, for instance).

It may be necessary also to clarify the resemblances between verbs and ideophones in Igbo from the phonological viewpoint. Both are consonant-initial; however, while verbs are often a syllable long, ideophones may be up to six or more syllables long. In addition, ideophones may use phonic units or phonotactic structures not available to verbs.

Again, while tonal modification is lexically strictly discriminating e.g. a high tone changed to a low in a verb root indicates a verb with an entirely different meaning, such a modification in ideophones may be either discriminating or connotative, or both, through often only connotative. Consider the following:

<u>Verbs</u>	<u>Ideophones</u>	
rì 'crawl'	kpòkòkpòkò	high-pitched rattle. . .
rì 'conceal oneself'	kpòkòkpòkò	low-pitched rattle. . .
bì 'live in/at/on'	yòkòyòkò	high-pitched rattle. . .
bì 'touch briefly'	yòkòyòkò	low-pitched/soft rattle. . .

The most important feature of these examples is that of consonant-initialness. Nouns, on the other hand, (with the exception of only about five) are initialled by syllabic elements (vowels and syllabic nasals); the same goes for the handful of adjectives in the language as well as adverbs and other lexical items of various other classifications.

2.2 VERBS FROM FULL IDEOPHONES.

Certain verbs derive from maximal phonosemantic units, by which we mean fully developed ideophones. The following is a list of such verbs (forms with an asterisk may have any tonal configuration):

<u>Verb</u>	<u>Cognate Ideophone</u>
yò 'rattle by bunch'	yòkòyòkò (*) 'rattling by bunch'
yò 'dangle/swinging freely by bunch'	yòkòyòkò (*) 'swinging by thick bunch'
yò 'run around (within container) by bunch'	yòròyòrò 'running around (within full container) by bunch'
kwe 'shake (hands)' (in greeting)	kweke(kweke) (*) 'broad-shaped object shaking/swinging along vertical axis'
kwe 'shake (head)' (in agreement)	
rè 'bend lightly/shaking slowly side-to-side' (of lithe vertical (?) object)	règerège/rèkerèke 'swinging slowly (of lithe vertical object)
rò 'bend sharply'	rogòrogò 'twisted side-to-side'
rogò 'bend sharply/twist'	"
rò 'squeeze/fold'	rokòrokò 'rumpled'
rokò 'squeeze'	"
ba 'spread (over)	bàràbàrà 'spreading continuously over'

et al.

In these ideophones, we find the presence of (especially) the medial consonant in their verbal cognates even though these consonants have disappeared on the surface. For the verb **yò**, its inherent ambiguity is really determined by the ambiguity of its underlying **k₂** which, as shown in 1.2.1 is capable of several meanings. Further ambiguity is determined by the occurrence of an underlying **r₂** in at least one case.

For the verb **kwe**, the same situation holds except that only one value of **k₂** is selected, namely: 'shaking side-to-side/back-and-forth'. The phonosemantic value of a **k₂** is so clear and strong in Igbo that it was made the topic of a paper (Maduka, 1988b) where it was designated **k_m**. In the paper referred to, the motivational sources for the **k₂** values are adduced. The instances presented in this paper lend further credence to the

hypotheses developed earlier.²

It appears that in the process of lexicalization of the descendant verbs, a process that may better be referred to as tonal imposition took place, accounting thereby for the difference in tonal values commonly observed between antecedent ideophone and resultant verb.

With respect to vowels, however, a different process appears to have taken place which may be called vocalic fossilization. Here, one of the several possible vowels is arrested, to the exclusion of others. For instance, the ideophone **yegeyege** means 'slow swinging/dangling (of bunch)', yet **yè** or **ye** has not been cognately lexicalized. A parallel process of consonantal fossilization may be said to hold also, since there is no verb ***chò** or ***chò** corresponding to the ideophone **chokochoko**.

The most probable explanation for all this is that for fossilization to occur, there must be great affinity between C₁ (initial consonant) and V₁ (vowel) in the sense that the reality they capture within the cultural milieu must be most natural and quite common.

2.3 VERBS FROM MINIMAL PHONOSEMANTIC PRIMITIVES.

There appear to be verbs that derive simultaneously with ideophones directly from phonosemantic primitives rather than indirectly from ideophones. In these, for instance, the value of the medial consonant (C₂) would be absent. The following are examples:

VerbCognate Ideophone

kpò 'dry up/harden'	kpòkòkpòkò 'rattling by hard, dry object in full container'
mì 'slip'	mìrìrìrì 'slippery'
pu 'open up/burst through' (with a small hole)	purupuru 'bursting and running/flowing through a hole'
pì 'squeeze (out)'	pìrìpìrì 'bursting and running/flowing through small hole'
gbu 'slip (away)' (of hard object)	gburugburu 'slippery' (of hard object)
mu 'smoothen/sharpen'	murumuru 'smooth (and shiny)'
kpu 'mould through compression'	kpurukpuru 'hard, small and roundish'
fe 'become light'	fefefere 'light and soft'
jo 'be ugly'	fekefeke 'light and stiff'
	jì '(pejorative connotation)'

As stated earlier, these verbs, though phonosemantic in their derivation (see 1.2), cannot be said to be reduced cognate ideophones. In this matter, the meanings of the related verbs and ideophones is the evidence.

² In a contemporary television comedy Icheoku shown on Imo Television, based on the often tortuous, sometimes fabricated interpretations by court clerks during the period of the colonial Native Courts, the clerk often uses the sentence 'he **kwèkè** head' for telling the white District Officer that the person under interrogation acceded (i.e. nodded his head positively) to a suggestion or allegation. Another interesting situation is that conveyed by the following song used by the lead team of a troupe of masqueraders:

kwèke kwèke
èbùlè jì isì èje ògù (the ram goes to fight with its head)
kwèke!
èbùlè jì isì èje ògù

2.4 ONOMATOPOEIC VERBS.

These are a special kind of ideophone in which speech sound is used to represent non-speech sound or noise. The sounds that can be produced by the organs of speech are necessarily limited. However, this range of possible sounds will inevitably be matched onto the myriad possible environmental sounds or noises. For this to be feasible, certain cognitive matching strategies have to be adopted. This is exactly what happens, and an instrumental analysis of onomatopoeia and noises they purport to represent, shows that they are not strictly identical though their similarities are clear. It appears sensible to claim that the verbal, linguistic sequences in onomatopoeic forms are such that stop consonants represent fundamental frequencies, vowels represent formant structures, while tones indicate pitch transitions, etc.

Verbal 'vertical slicing' of noises into consonants and vowels is the least that can be done by way of formal representation of noise through speech (Goldsmith, 1976). For the pure sound ideophones, there is a further step toward symbolization through increased number of syllables and reduplication. In the previous section we saw some ideophones that have a noise component; in this section we look briefly at verbs that derive from the onomatopoeic component (especially) of consonants.

<u>Verb</u>	<u>Onomatopoeic Origin</u>
kwa 'sew (with sewing machine)'	kw^(h)V - noise of vibrating or grating object(s)
kwe 'sing'	"
kwu 'talk'	"
kwu 'reverberate'	"
kw^hò 'reverberate (but louder and from more numerous objects than kwu)'	"
kwò 'grind'	"
kw^ha 'cry'	"

2.5 VERBS FROM PHONOSEMANTIC UNITS AND SEMANTIC TRANSFER.

Several verbs are derived from phonosemantic entities but appear not to be so. Several transfer mechanisms are adopted, including metaphor, synaesthesia, and plain literal transfer. The following are some examples, with their sources and transfer mechanisms (all sources are also verbs unless otherwise stated or obvious):

<u>Verb</u>	<u>Phonosemantically Derived Source</u>	<u>Transfer Mechanism</u>
pu 'germinate'	pu 'burst through (with hole) (with hole)'	literal transfer
ba 'get rich'	ba 'spread (over)'	metaphor
kwe 'agree'	kwe 'shake (head)'	metaphor
fe 'fly'	fe 'become light'	simple extension
kw^ha 'mourn' (ceremony)	kw^ha 'cry'	metaphor
kwu 'be the topical and exciting issue of the day'	kwu 'reverberate'	metaphor
wù 'be the topical and exciting issue/person of the day'	wù 'hum'	metaphor
ma 'be beautiful'	màà/màrà/màrà (ideophone) glowing/flashing (of light)	metaphor
rò 'thicken'	rò 'bend sharply'	synaesthesia
ji 'be black'	jì 'pejorative'	metaphor

Certain cases may not appear unless supporting statements are made, e.g. the initial consonant j_1 . This consonant (as well as most palatals) in initial position in ideophonic words conveys pejoration or a depreciatory impression in most languages, and is one of the many strategies used for achieving this meaning. This is extensively discussed in Maduka (1986). The following are a few examples.

Igbo

jabajaba 'nonsensical talk, jabber'
jagajaga 'rough, not smoothly done'
jakajaka 'rough, scattered'

Yoruba

jalājàla 'tattered, torn violently'
jatijàti 'nonsensical behavior'
jakūjàku 'scattered, disarranged'

Nembe

jakàjakà 'ruffled, shaggy, rough (hair)'
jakàkaà 'shaggy (dried twigs)'

3. CONCLUSIONS.

There is far more sound symbolism in natural languages than is often appreciated. In addition, there are processes that collaborate with symbolism in the lexicon to create new words and meanings. In this paper, we have considered sets of verbs in Igbo that are sound symbolic in essence and attempted to show their phonosemantic antecedents.

We found several interesting ways by which verbs may be derived via phonosemantic primitives, including:

1. truncation of developed ideophones with full meaning intact e.g. **kwe** 'shake hand/head' from **kwèke/kwekè** 'shake broad-shaped object side-to-side/up-and-down/back-and-forth'.
2. metaphorical transfer from truncated forms e.g. **kwe** 'agree' from **kwe** 'shake head'; **kwe** 'salute' from **kwe** 'shake hands'.
3. simultaneous derivation from phonosemantic primitives that do not yet build up a full ideophone e.g. **kpo** 'dry up/harden', cf. **kpokokpoko** 'rattle from within compact containing vessel by hard, dry object'.
4. direct onomatopoeic derivative (especially) from consonants e.g. **kwò** 'grind', **kwu** 'reverberate'.
5. metaphorical or synaesthetic transfer from verbal forms simultaneously derived from phonosemantic primitives as are full ideophones e.g. **pu** 'germinate' cf. **pu** 'burst through with a hole'; **ma** 'be beautiful' cf. **màà** 'glowing', **màràrà** 'flashing'.

The following diagram summarizes the patterns of derivation of verbs and ideophones from phonosemantic primitives:

Phonosemantic > ([Ideophone]>) [Verb] (>[Verb])
 Primitives

Nevertheless, segments and phonotactic patterns not allowed in the normal part of the lexicon still cannot transfer in any way from phonosemantic primitives to such 'phonosemantic verbs'. This seems to relate to the fact that, inevitably, verbs are seen as belonging to the normal part of the lexicon. It is for this reason that their tones and

(mostly) vowels become fixed in this process of fossilization as form-class items.

Finally, that some verbs derive from phonosemantic primitives (and as such are not entirely arbitrary) should be expected from the values that iconism serves in communication. It renders words more evocative, more memorable and more stable. It also makes words more easily learnable. It would be worthwhile to see how much sound symbolism/iconism exists in other form classes and in other languages and what role it plays in historical change.

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