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An Optimality Theoretic analysis of Yoruba hypocoristic personal names: Issues of truncation, reduplication and tone

Taiwo Oluwaseun Ehineni

Department of African and African American Studies, Harvard University, United States of America
E-mail: taiwo_ehineni@fas.harvard.edu

Abstract
This paper provides an Optimality Theoretic analysis of Yoruba hypocoristic personal names with the aim of showing the interaction of different linguistic processes in the formation of Yoruba names. Based on the data collected from Yoruba texts and interactions in the speech community, this study demonstrates that the formation of the hypocoristics involves not only processes of shortening or reduplication, but also tonal truncation. While Akinlabi and Liberman (2000) note that Yoruba has tonotactic restrictions—where especially vowel-initial words can only take a low or mid tone but not a high tone—, this study reveals that such restriction may be violated in formation of hypocoristics, where reduplicated forms tend rather to satisfy a tonal requirement of HHML to be well-formed. Crucially, the study shows that deriving the hypocoristic in Yoruba involves processes relating not only to the foot structure (foot binarity), where the base of the derived form is expected to be a binary foot, but also, and essentially, processes relating to the tonal structure.

Keywords: Hypocoristic names; reduplication; truncation; tone; Yoruba; onomastics; Optimality Theory

1. Introduction: hypocoristic names

Hypocoristic names are formed by the truncation, affixation, or reduplication of a particular name to indicate the speaker's affection toward the hearer (Newman & Ahmad 1994). In the literature, hypocoristics are referred to "as pet names, fondling endings, terms of endearment, diminutives, effeminate diminutives, and familiarity markers" (Newman & Ahmad 1994:159). According to van Langendonck (2007), hypocoristics are personal names with a diminutive semantic component. They may be used to mark social status, that is, a way through which a superordinate addresses a subordinate person (Obeng 1997; Seide & Petrulione 2020). In Yoruba, however, hypocoristic names may also be used to show familiarity and intimacy with a peer or younger person (Ola 1995). Furthermore, as Obeng (1997) observes for Akan hypocoristics, there are different contexts of interaction in which Yoruba hypocorsitic names may be used. In Yoruba, as in Akan, these contexts include peer contexts, superior-to-subordinate contexts and subordinate-to-superior interactive contexts. In a superior-to-subordinate context, hypocoristic names express affection, tenderness, the idea of being loved or worth caring for, and may also denote the physical smallness of the referent. This context is commonly seen in parent-child interactions, where the child feels loved and cared for by his/her parent. The peer context refers to the use of hypocoristics among equals, which may be denoted by age or status. In this context, hypocoristic forms indicate solidarity and friendliness.

It is important to note that, among the Yorubas, the use of the hypocoristic varies in terms of age and status. Both are not necessarily the same. For instance, a young person with a high socioeconomic status may not use a hypocoristic form to refer to an older person with a low socioeconomic status. This would be seen as disrespectful and arrogant on the part of the young person. In fact, age is also more significant than professional status in determining the use of a hypocorsitic form. Hence, equality is often a function of age rather than status. Basically, there are social constraints on the use of the hypocoristic among the Yorubas, of which age is the most definitive.

In terms of structure, hypocoristic names may be formed by shortening (Ola 1995) or reduplication (Orie 2002). In some other cases, the tonal pattern may be modified to realize a different tonal pattern in the derived hypocoristic name. For personal names in Yoruba, the following hypocoristic names in (1) are formed through shortening.

(1)	*Original Name*	*Gloss*	*Hypocoristic Form*	*Gloss*
a.	ọláolúwa	the wealth of God	ọlá or olú	wealth
b.	ìfẹ́olúwa	the love of God.	Ìfẹ́ or olú	love
c.	akinọlá	the valor of wealth	akin or ọlá	valor
d.	adẹ́ọlá	the crown of wealth	adẹ́ or ọlá	crown
e.	fúnmiláyọ̀	give me joy	fúnmi or layọ̀	give me
f.	olúwaṣẹ́gun	God conquers	olú or ṣẹ́gun	conquer
g.	táyéwò	taste the world	táiwò	taste world
h.	kẹ́hìndé	last to come	kẹ́nì	last to
i.	bùkúnọlá	add to wealth	búkì	add to
j.	tèmilolúwa	mine is God’s	témì	mine
k.	similolúwa	rest on God.	símì	rest
l.	ọlánrewájú	wealth is moving forward	lánre	wealth moving
m.	dámilọ́lá	make me wealthy	dámì	make me
n.	fọlákẹ́	use wealth to nuture	fọlá	use wealth

The formation of Yoruba hypocoristic names may be analyzed as involving three patterns of shortening which either selects the (*i*) subject or (*ii*) the predicate, or (*iii*) merges both. In (1a) – (1f), the subject or the predicate is selected to be retained/deleted. The first NP is the subject while the second NP is the predicate. For instance, in the name *adẹ́ọlá*, the NP *adẹ́* is the subject while the NP *ọlá* is the predicate. The hypocoristic names in (1g)-(1n), however, are formed by shortening by merging the subject and predicate. It is not exactly clear why certain parts are deleted and some are retained. For instance, while ọlá is retained in the hypocoristic forms in (1a)-(1d), it is not retained in the forms *Búkì* in (1i) and *Dámi* in (1m). It is also truncated in (1l) to *Lánre*, contrary to (1a) where it occurs similarly in a word initial position and retained. Hence, to adequately account for the diverse patterns in the hypocoristics, it is important to examine the prosodic structure of the hypocoristic forms.

The purpose of the present study is to examine the phonological constraints on hypocoristic formation in Yoruba from an Optimality Theoretic (OT) approach. Hence, in the next section (section 2), a brief introduction to OT as framework is given. Section 3 examines the data which demonstrate the processes of truncation and reduplication in Yoruba hypocoristics, while section 4 presents Optimality Theoretic (OT) analyses of these processes. The results from the analyses indicate that the formation of hypocoristic personal names in Yoruba, either by shortening or reduplication, are based on the prosodic word template or foot. Section 5 closes.

2. The Optimality Theory (OT) Framework

Optimality Theory is a formal linguistic model, in which grammars consist of a universal set of violable constraints that are ranked in a language-particular hierarchy. Lower-ranked constraints are often forcibly violated in order to improve satisfaction of higher-ranked constraints. The optimal or most harmonic pronunciation of a given word is that output candidate which best fulfills the language-specific ranking for a selected input form (See Prince and Smolensky 2004, McCarthy 2007). Crucially, OT is a theory of constraint interaction in grammar. An OT grammar has three components. CON is the component that defines the set of universal violable constraints. GEN is the component where output candidate parses are generated based on input forms. EVAL is the component that selects an optimal output from the set of alternative candidates, given a language-specific hierarchical ordering of CON. The path from the input to the output is specified below:

OT: the organization of the grammar

/input/ → GEN → EVAL → [output]
candidate 1
candidate 2
candidate 3

As McCarthy (2007:4) explains OT sets up a basic dichotomy between the operational component of the grammar and the constraint component. The operational component, called GEN, constructs a set of candidate output forms that deviate from the input in various ways. The constraint component, called EVAL, selects a member of this set to be the actual output of the grammar. In other words, a set of candidates is obtained from GEN, evaluated by EVAL using a constraint hierarchy, and the candidate that violates top-ranked constraints less frequently is chosen as the grammar's output.

Constraints may be divided into major categories: markedness and faithfulness. Markedness constraints relates to linguistic well-formedness (i.e complex consonant clusters); however, faithfulness constraints are inherently conservative, ensuring that output resemble its input. Because markedness constraints favour some linguistic structures over others, they are often in tension with faithfulness constraints, which resist changes to input structures. This tension is called constraint conflict, and it is resolved in OT by ranking.

Hence, this study would identify crucial constraints in Yoruba grammar and how these interact in the realization of optimal forms in the formation of hypocoristic names.

3. The structure of Yoruba Hypocoristic Forms

Yoruba hypocoristic names show basic processes of truncation and reduplication. In fact, a major area where truncation occurs in Yoruba is the area of hypocoristic name formation. According to Ola (1995), names in Yoruba may be regularly shortened to either VCV or CVCV – a binary (bimoraic or disyllabic) foot. Furthermore, as Ola (1995:195) observes, the shortened names always correspond to the leftmost segmental materials of the morpheme. For instance, a name such as *kọ́láwọlé* may be realized as *kọ́lá* or *wọlé*, while a name like *fọlámi* may only be shortened as *fọlá* – other forms such as **lami* or **mi* are impossible. The latter form **mi* is ruled out by the foot-based requirement, and although the former form **lami* is not ruled out by this requirement, it may not be an optimal shortened form. Ola (1995) therefore proposes that truncation in Yoruba is also constrained by a leftmostness requirement, and it is this requirement that rules out **lami* from being optimal. This leftmostness requirement is also what is responsible for the possibility of variants in truncated forms. Hence, Ola (1995) suggests some prosodic and leftmostness requirements for a truncation analysis which are presented below in (2).

(2) a. TRUNC = Foot: The left and right edges of TRUNC must coincide with the left and right edges of a binary foot.
b. ALIGN TRUNC (TRUNC, L;Morpheme,L): The left edge of the truncative must be aligned with the left edge of a morpheme.
c. ANCHORING: A prefix-initial segment must correspond with the initial segment of the base, while a suffix-final segment must correspond with the final segment of the base.
d. CONTIGUITY: A copied form must be a continuous substring of the base in order to prevent the skipping over of segmental melody in mapping.
e. PARSE: Phonological constituents are licensed by higher prosodic structure (segments, moras, syllables and feet should be parsed).

These constraints are used to analyze the truncation process in names. According to Ola (1995:160), the truncation of the name *fọlámí* may be represented as follows in the tableau in (3).

(3) TRUNC=FOOT, ALIGN TRUNC, ANCHORING, CONTIGUITY >> PARSE

BASE:/fọlá-mí/	TRUNC=FOOT	ALIGN TRUNC	ANCHOR	CONT	PARSE
a. lámí		*!	*		**
b. mí	*				****
c. fọmi				**!	**
☞d. Fọlá					**

Ola (1995) explains that, even though candidate (3a) satisfies TRUNC=FOOT, it is still sub-optimal because it violates ALIGN TRUNC and ANCHOR. This candidate *lámí* (3a) violates ALIGN TRUNC since its left edge does not align with the left edge of the morpheme in the base (**fọ**lá-mi). Also, while ANCHOR requires corespondence at the initial and final segments of the base (right and left edges), candidate (3a) *lámí* only corresponds with the final segment from the base (fọlá-**mi**). Hence, it is not anchored at the initial segment, and therefore fails to satisfy

ANCHOR. Candidate (3b) - a monosyllabic word - is ruled out by violating TRUNC=FOOT, while candidate (3c) fails by violating CONT; the truncated form in (3c) does not constitute a contiguous string from the base. Hence, the last candidate (3d) wins by not violating any higher-ranked constraints and is not fatally penalized for violating PARSE, which is lower-ranked. It violates PARSE because the final syllable [mi] of the base is not realized in the truncated form.

There is, however, another major candidate which is not mentioned by Ola (1995), namely *ọlá*. As discussed in the following section, *ọlá* may also be ruled out by the constraint ranking suggested in the tableau in (3), since it does not satisfy ALIGN TRUNC and ANCHORING constraints, thus making the candidate (3d) the only optimal form. As shown in the tableau in (3'), the fifth candidate *ọlá* (3'e) violates ALIGN TRUNC since the [f] at the left edge of the full name is not at the left edge of the truncated name. Similarly, it violates ANCHORING since the form *ọlá* does not correspond to the initial segment of the base (though it agrees with the final segment of the base – ***f****ọ****lá****-mi*).

(3) TRUNC=FOOT, ALIGN TRUNC, ANCHORING, CONTIGUITY >> PARSE

BASE:/fọlá-mí/	TRUNC=FOOT	ALIGN TRUNC	ANCHOR	CONT	PARSE
a. lámí		*!	*		**
b. mí	*				****
c. fọmi				**!	**
☞d. fọlá					**
e. ọlá		*	*		

Another process that has been discussed in Yoruba hypocoristic forms is duplication, also known as reduplication (see Ola 1995; Abiodun 1997; Adewole 1997). Pulleyblank (2009) identifies four major types of reduplicative patterns in Yoruba and discusses how each exhibits rather different properties. Pulleyblank (2009:311) explains that, on one hand, agentive reduplication (4i) involves two identical copies of a base, with both segmental and tonal material copied, while infixing reduplication (4ii) involves a complete copy of the base supplemented by a segmentally and tonally fixed infix. Also, whereas distributive reduplication (4iii) copies part of a base, restricting its copying to segmental material, gerundive reduplication (4iv) copies only part of a base, mixing the copied material with lexically specified material (Pulleyblank 2009:311). He further claims that these four reduplicative patterns involve complete or partial identity between a base and a reduplicant resulting from morphological copying or the satisfaction of prosodic requirements. These reduplicative patterns are presented below in (4).

(4) Reduplication Patterns in Yoruba (Pulleyblank 2009:312)

i. Agentive reduplication

	Noun	*Gloss*	*Verb*	*Gloss*
a.	woléwolé	'sanitary inspector'	wolé	'look at the house'
b.	pẹjapẹja	'fisherman'	pẹja	'kill fish'
c.	yọyínyọyín	'dentist'	yọyín	'extract tooth'

ii. /*Kí/* infixation

	Noun	*Gloss*	*/kí/ form*	*Gloss*
a.	fìlà	'cap'	fìlàkífìlà	'any cap'
b.	pátákó	'wood'	pátákókípátákó	'any wood'
c.	jàgùdà	'thief'	jàgùdàkíjàgùdà	'any thief'

iii. Distributive reduplication

	Noun	*Gloss*	*every-form*	*Gloss*
a.	ewé	'leaf'	eweewé	'every leaf'
b.	ọdún	'year'	ọdọọdún	'every year'
c.	oṣù	'month'	oṣooṣù	'every month'

iv. Gerundive reduplication

	Verb	*Gloss*	*Gerund*	*Gloss*
a.	rí	'see	rírí	'seiing'
b.	gbé	'take'	gbígbé	'taking'
c.	jẹ	'eat'	jíjẹ	'eating'

According to Pulleyblank (2009), these reduplicative patterns exhibit different unique properties. The first type of reduplication (agentive reduplication, 4i) involves the faithful reduplication of a verb base combination – a form of total reduplication requiring correspondence between the base and the reduplicant. The second class of reduplication (*kí* infixation, 4ii) deals with the use of word-linker *kí* between two identical noun components. Pulleyblank (2009) notes that the presence of *kí* is due to the morphology, not to the phonology. Morphologically, *kí* (plus reduplication) indicates the meaning of "any" or "whichever". However, just like the agentive reduplication, the kí-forms also involve total reduplication through exact copying of the base in conjunction with an infixed morphological linker. Contrary to the initial two reduplicative types, the distributive case (4iii) is a foot-based pattern, involving the copy of an initial VCV sequence.

As Pulleyblank (2009) explains, the distributive type of reduplication involves the copy of a single foot. If the base constitutes a single binary foot, then the entire base is copied (i.e, *ewé* 'leaf' - *eweewé* 'every leaf'). In contrast, if the base is longer than a binary foot, then only the initial VCV sequence is copied (i.e *ojoojúmọ́* 'every day'). The last case of reduplication (gerundive reduplication, 4iv) is derived by affixing a [Cí] prefix, where the "C" is a copy of the first consonant of the verbal base. Thus, the formation of the gerundive is an example of partial reduplication, just like the distributive case.

Basically, Pulleyblank's (2009) study reveals that reduplication in Yoruba can be either partial or total, and may be influenced by phonological or morphological requirements. For instance, distributive reduplication satisfies a phonological requirement (only a foot is copied), but in the *kí*-form, reduplication is motivated by morphology – the infixation of *kí*. In fact, the entire base (not a prosodic constituent) is reduplicated. Thus, we can say that partial reduplication often seem to be clearly phonologically motivated (a prosodic constituent may be copied), while total reduplication provides the domain for morphological motivation.

Another important aspect of reduplication that Pulleyblank (2009) considers is the issue of tone. He claims:

> Reduplication in Yoruba exhibits 'tonal neutralization' – where if the first mora of the base is M, then both vowels of the distributive are M, but if the first mora of the base is L, then both vowels of the distributive are L.
>
> (Pulleyblank 2009:324-325)

This notion of tone neutralization is formalized by Pulleyblank as a *rule of leftward spreading* in Yoruba reduplication, where the tone in the base spreads leftwards in the reduplicant (as exemplified in the distributive). Thus, Pulleyblank (2009:337) comments:

> Many languages systematically require tonal specifications to be left-aligned – the left-edge asymmetry is built into early autosegmental treatments of tone such as Leben (1973) and Goldsmith (1976), we see left-edge preference emerging under reduplication.

The present study draws heavily from Pulleyblank's (2009) discussion of reduplication in Yoruba – especially the fact that reduplication may be phonologically induced in certain contexts in the language.

More significantly, however, is the fact that the present study makes certain observations on reduplication not covered in Pulleyblank's (2009) study, the first of which is that phonologically-induced reduplication occurs in Yoruba hypocoristic names. Second, the leftward spreading rule identified by Pulleyblank (2009) as occuring in Yoruba reduplication does not apply to reduplication in Yoruba hypocoristics. In fact, the tonal constituency of the hypocoristics functions very differently from the prosodic constituency of the hypocoristics. In other words, while reduplication in hypocoristics is prosodically motivated, the tone is not. Third, it has been widely claimed about tone behavior in Yoruba "that H tones may not occur on a word-initial vowel" (Pulleyblank 2009:341, see also Ola 1995; Akinlabi & Liberman 2000, 2001). However, in hypocoristics, a word-initial vowel may take high tones. This would consequently lead to the violation of Ola's (1995) influential tone constraint *[V́ to prohibit a bare High-toned initial V from occurring at the beginning of a word or phrase. Conceptually, this violation of a relevant faithfulness constraint of *[V́ in the formation of hypocoristics exhibits a pattern of the "emergence of the unmarked" (McCarthy & Prince 1994). These issues will be explored in detail in the next section, focusing specifically on reduplication in Yoruba hypocoristic personal names.

4. Analysis Of Yoruba Hypocoristic Personal Names

4.1 The Process of Truncation

The present analysis of shortened/truncated hypocoristic forms will be formalized based on theoretical discussions of output-output correspondence (see Kager 2004) and the Yoruba-related constraints in shortening processes provided by Ola (1995). However, based on the framework of output-output correspondence in morphological truncation, a model of correspondence relations in Yoruba hypocoristics is presented below in (5).

(5) *Correspondence relations in Yoruba truncated names*

BT-Identity

B [temilolúwa] ⇔ **T** [temi]

IO-Faithfulness ⇕

I /temi.ni.oluwa/

The I (Input) refers to the level of lexical entries as exemplified in (5j) by *temi* ‘mine’, *ni* ‘is’ and *oluwa* ‘God’ where the B (Base) is the stem that is non-truncated. It is from this base that truncation occurs to realize T – the truncated form. A correspondence relation holds between the base, its input and the truncated form, since forms like I-*temi.ni.oluwa*, B-*temiloluwa* and T- *temi* share some featural similarities. However, certain constraints specifically trigger the occurrence of the truncated forms (T) in Yoruba. Some of these constraints include the constraints provided by Kager (2004) and Ola (1995) which were discussed in previous sections.

First, from the data in (1), reproduced below in (1'), it is observed that the realized truncated form is a bisyllabic structure. For instance, the hypocoristic forms in (1a-d) are V.CV, while all other forms have CV.CV structure.

(1')	*Original Name*	*Hypocoristic Form*	*Gloss*
a.	ọláolúwa	ọlá or olú	the wealth of God
b.	ìfẹ́olúwa	ìfẹ́ or olú	the love of God
c.	akinọlá	akin or ọlá	the valor of wealth
d.	adẹ́ọlá	adẹ́ or ọlá	the crown of wealth
e.	fúnmiláyọ̀	fúnmi or layọ̀	give me joy
f.	olúwaṣẹ́gun	olú or ṣẹ́gun	God conquers
g.	táyéwò	táiwò	taste the world
h.	kẹ́hìndé	kẹ́nì	last to come
i.	bùkúnọlá	búkì	add to wealth
j.	tèmilolúwa	témì	mine is God’s
k.	similolúwa	símì	rest on God
l.	ọlánrewájú	lánre	wealth is moving forward
m.	dámilọ́lá	dámì	make me wealthy
n.	fọlákẹ́	fọlá	use wealth to nuture

It is suggested that the hypocoristic names all reflect a binary foot (bisyllabic) in prosodic terms. This therefore motivates the application of FT BIN (foot binarity), where the truncated form is a foot (TRUNC = FOOT), and BT (base-truncated form) refers to identity constraints. These prosodic and identity constraints are explained in (6).

(6) *Basic Prosodic and BT identity constraints for Yoruba truncation*

TRUNC = FOOT: The left and right edges of TRUNC must coincide with the left and right edges of a binary foot

MAX-BT: Every element in the Base has a correspondent in the Truncated form.

The constraints in (6) are necessary because Yoruba hypocoristic forms generally involve a process of structural reduction, but the reduced forms may not be smaller than a binary foot.

Thus, it is expected that there would be a constraint hierarchy where Foot Binarity (FT BIN) is ranked higher than the faithfulness constraint MAX-BT to be able to satisfy the minimal requirement of a bisyllabic foot in the output. This analysis of constraint ranking is provided in the tableau in (7).

(7) /Tèmilolúwa/ → [Témì] 'mine is God's' TRUNC=FOOT >> MAX-BT

Input: /tèmi-ni-olúwa/ Base: [tèmilolúwa]	TRUNC = FOOT	MAX-BT
a. tèmilolúwa	*!	
b. olúwa	*!	*
☞c. témì		*

In the tableau in (7), candidate (7b) *olúwa* is ruled out since it fatally violates all constraints – it violates MAX-BT through deletion of initial segments and violates TRUNC = FOOT since it is not a bisyllabic foot. On the other hand, faithful candidate (7a) *tèmilolúwa* satisfies MAX-BT since nothing is deleted but fails to satisfy a higher ranked constraint, TRUNC = FOOT, since it is more than a bisyllabic foot. The optimal candidate is *témì* (7c), which, though it violates MAX-BT, satisfies the higher ranked TRUNC = FOOT. Crucially, the ranking of TRUNC = FOOT over MAX-BT produces the winning candidate in the hypocoristic form. However, these two constraints alone may not rule out other eligible candidates. For instance, *lolú* is a possible candidate but not an optimal hypocoristic form for the name *Tèmilolúwa*. To account for the disqualification of *lolú*, another constraint must be considered.

It is generally observed that the hypocoristic forms always comform to the leftmost segmental materials of the morpheme. For instance, a name such as *akinọlá* may be reduced to either *akin* or *ọlá*, whereas a name like *fọlákẹ́* may only be shortened to *fọlá*, forms such as *lákẹ́* or *kẹ́* are disallowed. The latter form *kẹ́* is ruled out by the foot binarity restriction proposed earlier. The question is, however, why the binary footed *lákẹ́* is not allowed in the derived form. Moreover, why does the name *olúwaṣẹ́gun* have two hypocoristic variants - *olú* or *ṣẹ́gun*? To answer these quesions, I suggest that hypocorization targets the leftmost properties of the morpheme. Hence, aside from the templatic requirement of foot binarity, there is a leftmostness constraint which is formalized as follows in (8), based on Ola (1995).

(8) ALIGN TRUNC (TRUNC, L; Morpheme, L): The left edge of the truncative must be aligned with the left edge of a morpheme.

The constraint in 8 is given to account for the fact that the left edge of a hypocoristic form is observed to be identical with the left edge of a morpheme in the original name. This constraint would, for instance, disqualify *lolú* as a valid hypocoristic derivation from *Tèmilolúwa*. In addition, the constraint in (8) may shed light on the possibility of having two hypocoristic variants. The ALIGN TRUNC constraint will be used with previously identified constraints TRUNC=FOOT and MAX-BT to produce the optimal candidate. The analysis of the disqualification of *lolú* is presented in the tableau in (9) below.

(9) /Tèmilolúwa/ → [Témì] 'mine is God's'

Input: /tèmi-ni-olúwa/ Base: [tèmilolúwa]	TRUNC = FOOT	ALIGN TRUNC	MAX-BT
a. tèmilolúwa	*!		
b. olúwa	*!		*
☞ c. témì			*
d. lólú		*!	*

TRUNC = FOOT, ALIGN TRUNC, MAX-BT

Essentially, candidate (9d) *lolú* is ruled out by ALIGN TRUNC since it does not align with the left edge of the morpheme (i.e tèmi or olúwa). Although both candidates (9a) and (9b) do not violate ALIGN TRUNC, they are ruled out by TRUNC=FOOT, as previously explained. However, note that there is no ranking argument in the constraint hierarchy. In other words, if the ranking of constraints is reversed, candidate (9c) would still be the winning candidate. A fuller analysis is provided in (10), including a variety of other possible candidates for the hypocoristic form of the name *Tèmilolúwa*.

(10) /Tèmilolúwa/ → [Témì] 'mine is God's'

Input: /tèmi-ni-olúwa/ Base: [tèmilolúwa]	TRUNC = FOOT	ALIGN TRUNC	MAX-BT
a. tèmilolúwa	*!		
b. olúwa	*!		*
c. lúwa		*!	*
d. wa	*!	*!	*
☞e. témì			*
f. mi	*!		*
g. lólú		*!	*

TRUNC = FOOT, ALIGN TRUNC, MAX-BT

The new candidates *lúwa* (10c) and *wa* (10d) all violate high ranked constraints ALIGN TRUNC and MAX-BT, while *mi* (10f) violates TRUNC = FOOT and MAX-BT. Both candidates *lúwa* and *wa* are ruled out by ALIGN TRUNC since they do not correspond to the left edge of the morphemes in the base. Candidate (10f) *mi* is monosyllabic and therefore violates TRUNC = FOOT. Thus, all the new candidates are "harmonically bounded" since they cannot win regardless of the ranking of constraints. Crucially, thus, the truncation of forms is influenced by the prosodic requirement of foot binarity.

4.2 The Process of Reduplication

In this section, specific examples of Yoruba hypocoristic personal names formed through reduplication are analyzed following perspectives discussed in sections 2 and 3.1. Yoruba hypocoristic personal names formed through reduplication are presented in (11).

(11)	*Original Name*		*Hypocoristic Form*	*Gloss*
a.	akin[1]ọlá	[akĩɔlá]	ákĩ́.akĩ́ or ọ́láolà	valor of wealth
b.	ìfẹ́olú	[ìfɛ́olú]	ífẹ́ifẹ̀ or ólúolù	love of God
c.	òjóadé	[òɟóadé]	ójóojò or ádéadè	man of crown
d.	wúràọlá	[wúràɔlá]	wúráwurà or ọ́láọlà	gold of wealth
e.	adéṣínà	[adéʃínà]	ádéadè or ṣínàṣinà	crown makes a way
f.	olúwaṣẹ́gun	[olúwáʃɛ́gũ]	ólúolù or ṣẹ́gúnṣegùn	God conquers
g.	ṣemílóre	[ʃemílóre]	ṣémíṣemì	Be good to me
h.	mosúnmọ́lá	[mosṹmɔ́lá]	mósúnmosùn	I draw towards wealth
i.	ìpíndọlà	[ìpĩdɔlà]	ípínipìn	heritage becomes success
j.	kọ́lédowó	[kɔ́lédowó]	kọ́lékọlè	build house of money
k.	títíolúwalọ́pẹ́	[títíolúwalɔpɛ́]	títítitì	forever to God is the praise
l.	modúpẹ́ore	[modúpɛ́ore]	dúpẹ́dupẹ̀	I am thankful for blessing

In forming a hypocoristic through reduplication, certain features are observed. First, the first foot of the original name may be reduplicated as shown in cases such as (11a) *akinọlá – akinakìn*, (11b) *ìfẹ́olú – ífẹ́ifẹ̀*, (11c) *òjóadé – ójóojò* and so on. Second, the other foot in the name may also be reduplicated as manifested in alternative forms like (11a) *akinọlá – ọ́láọlà*, (11b) *ìfẹ́olú – ólúolù*, (11c) *òjóadé – ádéadè*. Third, the tonal structure of the original form may not be preserved in the derived form. Foot structure and tonal structure are distinctive aspects of the reduplicated hypocoristic. While a foot from the original name is reduplicated, the tone from the original name is not. It is significant to point out that the new tonal structure in the reduplicated hypocoristic distinguishes the hypocoristic as a unique form separate from the original name. In other words, while the reduplicant is derived from the base and has similar foot structure with the base, the tone designates the reduplicant as a unique form. For instance, (11a) *ọ́láọlà* is derived from the foot *ọlá* in [*akinọlá*] but has a different tonal structure (HH.ML) from the foot (MH) which will be further discussed in section 3.3. In evaluating the reduplicated hypocoristic forms from the OT approach, the following constraints are considered.

(12) *constraints deriving reduplicated forms in Yoruba hypocoristics*
RED = FOOT: The reduplicant (RED) must be a foot
MAX-IO: Every segment of the input has a correspondent in the output.

Note that the constraint RED = FOOT is modeled after the truncation constraint TRUNC=FOOT utilized in our discussion of truncation. Both constraints (RED = FOOT and TRUNC=FOOT) relate to the general idea of foot binarity - FT BIN. This constraint is a major prosodic requirement that governs both truncation and reduplication in the hypocoristics, unlike other constraints such as MAX-BT which applies specifically to truncation and MAX-BR that applies specifically to reduplication. The constraint RED = FOOT requires that a reduplicated form in the hypocoristic be a foot. This constraint imposes a prosodic requirement on the output form and is an undominated constraint in evaluating reduplicated hypocoristics. This analysis of the constraint interaction is presented in the tableaux in (13) and (14).

[1] Note that phonetic representation of the names are also provided after the names. This is to clarify the status of /n/ in Yoruba hypocoristics. In the names given (specifically (11a) *akinọlá*, (11f) *olúwaṣẹ́gun*, (11h) *mosúnmọ́lá*, (11i) *ìpíndọlà*) /n/ occurs after a vowel to indicate a nasal vowel. In other words, when /n/ occurs in a syllable final position, it often indicates that the immediate preceding vowel is a nasal vowel. This point is necessary since /n/ may also be a syllabic nasal in a context like *ńláńlá* in Yoruba, where it may be moraic. (see Ehineni 2017 for more discussion).

(13) /akinọlá/ → [ákínakìn]

Input:	/RED-akin-ọlá/	RED = FOOT	MAX-IO
a.	akinọlá.akinọlá	*!	
☞b.	ákín.akìn		*

RED = FOOT >> MAX-IO

(14) /akinọlá/ → [ọ́láọlà]

Input:	/RED-akin-ọlá/	RED = FOOT	MAX-IO
a.	akinọlá.akinọlá	*!	
☞b.	ọ́lá.ọlà		*

RED = FOOT >> MAX-IO

In tableaux (13) and (14), the candidate (13a, 14a) *akinọlá.akinọlá* is ruled out by RED = FOOT since the reduplicant (RED) is more than a foot. However, (13b) *akin.akin* and (14b) *ọ́lá.ọlà* are optimal forms by having a reduplicant that is a foot. Though (13b) *akin.akin* and (14b) *ọ́lá.ọlà* violate MAX-IO, since segments in the input are deleted in the output, they still win because MAX-IO is low ranked. Crucially, these indicate that RED = FOOT need to outrank MAX-IO in the constraint hierarchy to produce an optimal reduplicated form. To further buttress the ranking of RED = FOOT above MAX-IO, analysis of hypocoristic forms of names such as *òjóadé* and *adéṣínà* are presented in tablueax (15) and (16).

(15) /òjóadé/ → [ójóòjó / ádéadè]

Input:	/RED- òjó-adé/	RED = FOOT	MAX-IO
a.	òjóadé.òjóadé	*!	
b.	òjó.òjó		*
☞c.	ádé.adè		*

RED = FOOT >> MAX-IO

(16) /adéṣínà/ → [ádéadè / ṣínáṣinà]

Input:	/RED-adé-ṣínà/	RED = FOOT	MAX-IO
a.	adéṣínà.adéṣínà	*!	
☞b.	ádé.adè		*
☞c.	ṣíná.ṣinà		*

The candidates (15a) *òjóadé.òjóadé* and (16a) *adéṣínà.adéṣínà* are faithful by ensuring that all the segments in the input are in the output form. These candidates are, however, ruled out by violating RED = FOOT, since their reduplicated parts - [*òjóadé*] in *òjóadé.òjóadé* and [*adéṣínà*] in *adéṣínà.adéṣínà* are more than a foot. On other hand, the other candidates (15c, 16b,c) win by satisfying RED = FOOT, since their reduplicated parts constitute a foot (i.e **òjó**.òjó and **ádé**.adè). This further reinforces that RED = FOOT is an undominated constraint in deriving the optimal hypocoristic forms of the names. However, the constraints already identified (RED = FOOT, MAX-IO) may not be able to rule out possible but not optimal candidates, like *akin.akinọlá*. For instance, see the tableau in (17).

(17) /akinọlá/ → [ákínakìn]

Input:	/RED-akin-ọlá/	RED = FOOT	MAX-IO
a.	akinọlá.akinọlá	*!	
b.	ákín.akìn		*
X c.	ákín.akìnọlá		

Both candidates (17b) and (17c) satisfy the high ranked RED = FOOT constraint, but candidate (17b) violates MAX-IO and candidate (17c) does not. This therefore suggests candidate (17c) *ákín.akìnọlá* is the winning candidate. However, (17c) *ákín.akìnọlá* is not an optimal hypocoristic in Yoruba. Thus, a base-reduplicant identity constraint needs to be examined to rule out *ákín.akìnọlá*. Note that MAX-IO does not contend against the deletion of input segments in the reduplicant. This is because "the reduplicant has no input segments of its own, to which it might potentially be faithful" (Kager 2004:207). This constraint is presented below in (18).

(18) MAX-BR: Every feature in the base (B) has a correspondent in the reduplicant (R)

This constraint ensures that there is correspondence between the base and the reduplicant. In other words, it militates against deletion of segments in the reduplicant. Thus, while MAX-IO may not be able to rule out *ákín.akìnọlá*, MAX-BR would rule it out, as shown in the tableau in (19).

(19) /akinọlá/ → [ákínakìn]

Input:	/RED-akin-ọlá/	RED = FOOT	MAX-BR	MAX-IO
a.	akinọlá.akinọlá	*!		
☞b.	ákín.akìn			*
c.	ákín.akìnọlá		*	

RED = FOOT >> MAX-BR >> MAX-IO

In the tableau in (19), candidate (19c) *ákín.akìnọlá* fails to satisfy MAX-BR. In the form [ákín.akìnọlá], the base *-akìnọlá* does not correspond with the reduplicant *-ákín*. But in candidate (19b), the base *-ákín* corresponds with the reduplicant *-akìn*. Note that they both satisfy RED = FOOT since the reduplicant in both candidates (19b,c) conform to a foot. However, (19b) *ákín.akìn* wins by satisfying higher ranked MAX-BR which *ákín.akìnọlá* fails to satisfy. Crucially, MAX-BR needs to be ranked higher than MAX-IO to produce the winning candidate. Hence, the ranking of the reduplicative identity constraints over input-output faithfulness constraints is what makes the reduplicant more identical to the base than the input segments in reduplication.

Additionally, as suggested by examples (11g-l), some hypocoristic forms do not have variants. The name (11h) *mosúnmọ́lá*, for instance, may only be reduplicated as *mósúnmosùn*, not *mọ́lámọ́là*. Also, while *ọ́lá.ọ́là* is a possible hypocoristic form (see the tableau in 15), it is not an optimal form for the name *mosúnmọ́lá* – even though it satisfies the undominated constraint RED = FOOT. Therefore, we will examine why *ọ́lá.ọ́là* is not a possible hypocoristic form in *mosúnmọ́lá*. Also, we will discuss why the names in (11g-l) may have only one hypocoristic form, unlike the names in (11a-f) that have more than one hypocoristic form. First it should be noted that these names in (11g-l) are lexicalized sentential names and are therefore more morphologically complex compared to names in (11a-f). Furthermore, it is observed that the hypocoristic forms of the names in (11g-l) tend to favor the leftmost edge of the name. Hence, another constraint is suggested to analyze these other forms: LINEARITY (McCarthy & Prince 1995). This constraint and another alignnment constraint— namely, ALIGN RED —are formalized more clearly in (20).

(20) *Alignment and Linearity constraints in Yoruba reduplicated hypocoristics*
ALIGN RED (RED, L; Morpheme, L): The left edge of a reduplicant should correspond to the left edge of a morpheme.
LINEARITY: The linear order of elements in the output should be identical to the linear order of their corresponding elements in the input.

Using the constraints in (20), the analysis of the derivation of the hypocoristic for *mosúnmọ́lá* is presented in tableau (21).

(21) /mosúnmọ́lá/ → [mósúnmosùn] 'I draw towards wealth'

Input:	/RED-mo-sún-mọ́-ọlá/	RED = FOOT	ALIGN RED	LINEARITY	MAX-IO
a.	mosúnmọ́lá. mosúnmọ́lá	*!			
☞b.	mósún.mosùn				****
c.	mọ́lá.mọ́lá.			*!	*****
d.	ósún.osùn		**!	*	**
e.	ọ́lá.ọ́lá.				*******

RED = FOOT, ALIGN TRUNC, LINEARITY >> MAX

It should be noted that the constraint LINEARITY is different from ALIGN RED in the sense that, while the latter aligns the reduplicant to the left edge of the morpheme, the former requires that the reduplicant conform to the linear order in the input. Thus, in tableau (21), candidate (21c) *mọ́lá.mọ́lá* does not violate ALIGN RED since its left edge aligns to the left edge of a morpheme (i.e mọ́). However, it violates LINEARITY since the entire word *mọ́lá.mọ́lá* does not preserve the linear order – [mọ́-ọlá] – in the input. This is because the second back vowel in the input [mọ́-**ọ**lá] is deleted in the derived output [mọ́-lá], which deviates from the input linear order [mọ́-ọlà], showing a sequence of vowels at mopheme boundary. While the candidate *ósún.osùn* does not violate LINEARITY, it fatally violates ALIGN RED since its left edge deviates from the left edge of a morpheme in the input. Candidate (21e) *ọ́lá.ọ́lá* satisfies all high ranked constraints (just like the winning candidate – [21b] *mósún.mosùn*), but incurs more violations of MAX-IO. The winning candidate is (21b) *mósún.mosùn* since it is the most harmonic with the constraint hierarchy.

Apart from the processes of truncation and reduplication, a major factor in the formation of the hypocoristic is tone. The derived hypocoristic is characterized by a unique tonal structure, which is discussed in section 3.3.

4.3 The Process of Tonal Derivation

Previous sections have specifically focused on how hypocoristic personal names in Yoruba are formed through shortening and reduplication. However, tone also functions uniquely as a separate feature of the hypocoristic, especially in the reduplicated forms. In the data given in (1), the tonal structure of the derived hypocoristic does not conform with the base even though the output is derived from the base. Thus, while the reduplicant is prosodically derived from the base, its tone does not clearly reflect the base. Second, the derived tonal patterns appears to have a specific structure – H.H.M.L (High.High.Mid.Low). That is, regardless of the tone on the original name, the hypocoristic form takes a H.H.M.L tonal structure. This is significant to underscore because this is contrary to Akinlabi and Liberman's (2000:8) assertion that Yoruba has tonotactic restrictions where vowel-initial words especially can only take a low or mid tone, but not a high tone. However, in hypocoristic forms of personal names, high tones may occur vowel-initially as previously shown by the data in (1). For clarity, these vowel-initial names where high tone occur are reproduced below in (22).

(22)	*name*	*tone*	*hypocoristic*	*tone*
a.	akinọlá	M.M.M.L	ákínakìn or ọ́láolà	H.H.M.L
b.	ìfẹ́olú	L.H.M.H	ífẹ́ifẹ̀ or ólúolù	H.H.M.L
c.	òjóadé	L.H.M.H	ójóojò or ádéadè	H.H.M.L
d.	adéṣínà	M.H.H.L	ádéadè or ṣínáṣinà	H.H.M.L
e.	olúwaṣẹ́gun	M.H.M.H.M	ólúolù or ṣẹ́gúnṣegùn	H.H.M.L
f.	ṣemílóre	M.H.H.M	ṣémíṣemì	H.H.M.L
g.	mosúnmọ́lá	M.H.H.H	mósúnmosùn	H.H.M.L
h.	ìpíndọlà	L.H.M.L	ípínipìn	H.H.M.L

Note that the derived tonal pattern is not in any way motivated by the tonal structure of the original name. That is, the entire reduplicated hypocoristic, not just the reduplicant, always has a specific tonal form which is distinct from the base form. The realization of tonal truncation in the hypocoristic is influenced by other constraints not previously discussed. These constraints are summarized below in (23).

(23) *Constraints for tonal truncation in Yoruba*

MAX-T: No tonal feature in the input is deleted in the output

*[V́ : A high tone may not occur vowel initially at the beginning of a word or phrase ALIGN RED HYPO-T (HHML): The tonal structure of the reduplicated hypocoristic must be HHML.

It is important to reiterate that the ALIGN RED HYPO-T constraint specifically ensures that the reduplicated hypocoristic is realized with a High-High-Mid-Low tone in the optimal form. This tonal requirement does not hold for truncated hypocoristics. The constraint *[V́ (Ola 1995) prohibits a high-toned initial vowel from occurring at the beginning of a word or phrase and has been further identified as a major tone requirement in Yoruba (Akinlabi & Liberman 2000). MAX-T is a faithfulness constraint that militates any deletion of tone in the output form. The analysis of how these constraints interact in deriving the tonally optimal candidate in the hypocoristic is presented in the following tablueax in (24) and (25).

(24) /ṣemílóre/ → [ṣémíṣemì]

Input: RED-ṣemílóre/ HHML M.H.H.M	ALIGN RED HYPO-T	*[V́	MAX-T
a. ṣemíṣémi. M.H.H.M	*!		
b. ṣemíṣémí. M.H.H.H	*!		*
☞c. ṣémíṣemì. H.H.M.L			*

ALIGN RED HYPO-T >> *[V́, MAX-T

In tableau (24), candidate (24a) is a tonally faithful candidate by maintaining the tonal pattern from the original name, and so does not violate *[V́ and MAX-T. It is, however, disqualified by ALIGN RED HYPO-T, since the hypocoristic tone pattern is not realized. Candidate (24b) violates MAX-T since an input tone is deleted in the output but is principally disqualified by ALIGN RED HYPO-T since it lacks the required tonal pattern (H.H.M.L) in the derived hypocoristic. The third candidate (24c) is optimal since it satisfies the undominated constraint ALIGN RED HYPO-T by having the required tonal pattern H.H.M.L even though it violates MAX-T. Other tonally possible but non-optimal candidates are considered in tableau (25).

(25) /ṣemílóre/ → [ṣémíṣemì]

Input: /RED-ṣemílóre/ HHML M.H.H.M	ALIGN RED HYPO-T	*[V́	MAX-T
a. ṣemíṣémi. M.H.H.M	*!		
b. ṣemiṣèmì M.M.L.L	*!		*
c ṣèmìṣèmì. L.L.L.L	*!		*
d. ṣèmìṣemi. L.L.M.M	*!		*
☞e. ṣémíṣemì. H.H.M.L			*

ALIGN RED HYPO-T >> *[V́ , MAX-T

As in tableau (24), the nonoptimal candidates (25a-d) are ruled out by violating the constraint ALIGN RED HYPO-T. Thus, candidate (25e) is the winner since it does not violate this high-ranked constraint in the derived hypocoristic. Both tableaux in (24) and (25) show that there is a critical ranking of constraints in producing the optimal candidate. That is, if the constraint ranking is flipped the other way, the tonally faithful candidate (25a) *ṣemíṣémi*, which is not the tonally optimal hypocoristic, will be considered the winner. The faithful candidate incurs fewer violations of constraints but is disqualified by not satisfying a higher-ranked tonal constraint in the hypocoristic.

Of more importance is the fact that the derived hypocoristic may violate expected or regular tonal patterns in Yoruba. As previously noted, in Yoruba, there is a high-tone restriction in vowel-initial words in Yoruba (Akinlabi & Liberman 2000, 2001). However, this constraint is violable when deriving hypocoristic names. This can be seen in the following tableau in (26).

(26) /ìpíndọlà/ → [ípínipìn]

/ìpíndọlà/ L.H.M.L	ALIGN RED HYPO-T	*[V́	MAX-T
a. ìpínipìn L.H.M.L	*!		
b. ipínipìn. M.H.M.L	*!		*
☞c. ípínipìn. H.H.M.L		*	*

ALIGN RED HYPO-T >> *[V́, MAX-T

Note that candidates (26a) and (26b) do not violate *[V́ since they are vowel-initial words starting with a low (L) and Mid (M) tone respectively. The third candidate (26c), on the other hand, starts with a high tone which is disallowed in vowel-initial words in the language. However, candidates (26a,b) are rejected by ALIGN RED HYPO-T – a higher ranked constraint in the reduplicated hypocoristic. Candidate (26c) is optimal since it fulfills the tonotactic requirement of the reduplicated hypocoristic H.H.M.L.

Essentially, in deriving optimal hypocoristic names in Yoruba, there is a significant interaction between the process of reduplication, prosodic categories (foot) and tone. While a hypocoristic name may be formed by reduplication, high ranked constraints such as RED = FOOT and ALIGN RED HYPO-T impose prosodic and tonal constraints on the output form.

Furthermore, tone in reduplicated hypocoristic personal names behaves differently from other forms of reduplication discussed in Yoruba. On the nature of tone in Yoruba distributive reduplication, Pulleyblank (2009: 324) comments that “the tone is predictable from the moras of the reduplicant, where both moras of the reduplicant are M [Mid tone] if the first mora of the base is M and L [Low tone] and that tones may not occur on a word-initial vowel”. Pulleyblank’s (2009) view is anchored on cited examples such as *ewé - eweewé*, *ọdún - ọdọọdún, ọsù - ọsoosù,* where the tone of the reduplicant is derived from the initial mora in the base. However, in Yoruba hypocoristic reduplication, not discussed by Pulleyblank (2009) in the various Yoruba reduplicative patterns, the tonal structure of the reduplicant is not mora-predictable. A specific tonotactic structure is required in the output different from the prosodic requirements. That is, regardless of the moraic structure of the base, the tone on the reduplicant in the hypocoristic is expected to be H.H.M.L. That is, the reduplicated hypocoristic construction has its own tone melody that supercedes that of the base.

Consequently, the “rule of leftward spreading” (Pulleyblank 2009:334), postulated to account for tone movement in Yoruba reduplication, may not necessarily apply in the hypocoristic. That is, while the M tone moves leftward in Yoruba reduplicated forms such as *ewé - eweewé*, *ọdún - ọdọọdún, ọsù - ọsoosù* (provided by Pulleyblank), it does not do so in reduplicated hypocoristics such as *akinọlá - ákínakìn, wúràọlá - ọ́láọlà*. In fact, the tone in the reduplicated foot does not reflect the tone of the original foot in the base, since the tone melody is a property of the reduplicated hypocoristic construction.

5. Conclusion

This study has examined the role of foot structure and binarity in the formation of hypocoristic personal names in Yoruba. The foot, which is the constituent under which moras and syllables are grouped, serve as the basis for deriving the hypocoristic names. Furthermore, the notion of binarity in a foot requires the grouping of moras or syllables in twos. That is, when a hypocoristic name is formed, it is reduced to a bisyllabic or bimoraic foot. Forms that violate this structural requirement are disqualified. Hence, the well-formedness of a foot is influenced by the principle of binarity; a foot is maximally binary either at the moraic or the syllabic level (Prince 1991; McCarthy & Prince 1993). Therefore, the process of deriving hypocoristic forms of personal names in Yoruba is a foot-dependent prosodic process which maps sufficient segmental material from the base to foot in order to satisfy the templatic requirement.

Furthermore, foot structure and tonal structure are distinctive aspects of the reduplicated hypocoristic. This is due to the fact that, when deriving reduplicated hypocoristic forms, the reduplicant does not always retain the tonality of its original base, but retains a foot structure from the base. The discussion of reduplicated hypocoristics reveals that foot faithfulness should be distinguished from tonal faithfulness in reduplication. Hence, the idea of morphological identity between base and reduplicant (Downing 1997a,b,c) does not necessarily imply that morphology will assign the same tonal patterns to the two copies involved in reduplication.

In sum, the formation of hypocoristic personal names in Yoruba, either by shortening or reduplication, are based on the prosodic word template or foot. This reinforces the idea that morphological derivations may be determined by prosodic requirements. Put differently, the prosodic word is prefered to the lexical word. For instance, *olúwa* is a lexical word but is not a binary foot – not a bisyllabic or bimoraic foot, it is therefore not an optimal hypocoristic form. Finally, the formation of hypocoristic personal names may deviate from regular tonal patterns in Yoruba by requiring that an optimal form be H.H.M.L. This leads to the generally high-ranked tonal constraint *[V́ in Yoruba to be dominated in the hypocoristic.

References

Abíódún, M.A. 1997. More on reduplication in Yorùbá. *Journal of Nigerian Languages and Literatures,* 5: 93–98.

Adewole, S.M. 1997. Reduplication in Yoruba. *Linguistique Africaine,* 18: 105–129.

Akinlabi, A. & M. Liberman. 2000. The tonal phonology of Yoruba clitics. In B. Gerlach & J. Grijzenhoul (eds.), *Clitics in Phonology, Morphology and Syntax*. Amsterdam: John Benjamins. pp. 31-62. https://doi.org/10.1075/la.36.04aki

Akinlabi, A. & M. Liberman. 2001. Tonal complexes and alignment. In M. Kim& U. Strauss (eds.), *Proceedings of the North East Linguistic Society*, 31: 1-20. https://doi.org/10.1075/la.36.04aki

Downing, L.J. 1997a. Correspondence effects in Siswati reduplication. *Studies in the Linguistic Sciences,* 25: 81-95.

Downing, L.J. 1997b. Morphological correspondence in Kinande Reduplication. *Proceedings of Berkeley Linguistics Society*, 23: 83-94. https://doi.org/10.3765/bls.v23i1.1277

Downing, L.J. 1997c. Morphological correspondence on Kikerewe Reduplication. *Proceedings of WCCFL*, 16: 161-174.

Ehineni, T.O. 2017. Prosodic reduplication in Yoruba. *Journal of Universal Language,* 18(2): 39-59. https://doi.org/10.22425/jul.2017.18.2.39

Goldsmith, J. 1976. Autosegmental phonology. PhD dissertation, MIT.

Kager, R. 2004. *Optimality Theory*. London: Cambridge University Press.

Leben, W. 1973. Suprasegmental phonology. Doctoral dissertation, MIT. New York, Garland, 1980.

McCarthy, J. & A. Prince. 1993. Generalized alignment. In G. Booij & J. van Marle (eds.), *Yearbook of Morphology*. Dordrecht: Springer. pp. 79-153. https://doi.org/10.1007/978-94-017-3712-8_4

McCarthy, J. & A. Prince. 1994. Two lectures on prosodic morphology. Handouts of two lectures at OTS/HIL Workshop on Prosodic Morphology, Utrecht University, July 1994. [ROA- 59, http://ruccs.rutgers.edu/roa.html]

McCarthy, J. & A. Prince. 1995. Prosodic morphology. In J. Goldsmith (ed.), *The Handbook of Phonological Theory*. Blackwell. pp. 318-366.

McCarthy, J. 1995. Extensions of faithfulness: Rotuman revisited. *Linguistics Department Faculty Publication Series,* 36. MA: University of Massachusetts. [ROA-110, http://ruccs.rutgers.edu/roa.html]

McCarthy, J.J. 2007. What is Optimality Theory? *Language and Linguistics Compass*, 93. https://doi.org/10.1111/j.1749-818X.2007.00018.x

Newman, P. & A. Mustapha. 1994. Hypocoristics in Hausa. *Anthropological Linguistics,* 34: 59-172.

Obeng, G.S. 1997. From morphophonology to sociolinguistics: The case of Akan hypocoristic day-names. *Multilingua,* 16(1): 40-56. https://doi.org/10.1515/mult.1997.16.1.39

Ọla, Ọ. 1995. Optimality in Benue-Congo prosodic phonology and morphology. PhD. Dissertation, University of British Columbia.

Orie, Ọ. 2002. Yoruba names and gender marking. *Anthropological Linguistics,* 44(2): 115-142.

Prince, A. 1991. Quantitative consequences of rhythmic organization. Chicago Linguistic Society (Parasession on the syllable in phonetics and phonology) 26.2.355–98. https://doi.org/10.1002/9780470759400

Prince, A. & P. Smolensky. 2004. *Optimality Theory: Constraint Interaction in Generative Grammar*. Malden, MA, and Oxford, UK: Blackwell. [Revision of 1993 technical report, Rutgers University Center for Cognitive Science. Available on Rutgers Optimality Archive, ROA-537]

Pulleyblank, D. 2009. Patterns of reduplication in Yoruba. In K. Hanson & S. Inkelas (eds.), *The nature of the word: Studies in honor of Paul Kiparsky*. Cambridge, MA: The MIT Press. https://doi.org/10.7551/mitpress/9780262083799.003.0014

Seide, M.S. & P. Petrulione. 2020. Formation and usage of hypocoristics form in Lithuanian and Brazilian Portuguese. *Alfa: Revista de Lingüística*, 64: 1-25.

Van Langendonck, W. 2007. *Theory and typology of proper names*. Berlin: Walter de Gruyer. https://doi.org/10.1515/9783110197853