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# The Lexicosyntactic Analysis of Fused Compounds in Yoruba

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Abstract---Compounding is one of the productive word formation processes in human languages due to its eclectic means of formation. This paper focuses on the fused compounding process in Yorùbá. The aim of this study is to analyse the lexicosyntactic process involved in deriving fused compounds in Yorùbá. The paper states the possible combinations of fused compounding in Yoruba; it examines the different processes that can occur at the syntactic level of compounding; and it analysed the processes which occur at the syntactic level of compounding. Data for this study were gathered from the introspection of the researcher since the researcher is a native speaker of the language of the study. Data gathered were validated by other native speakers for accuracy and authentication. Also, data were obtained from previous related literature. The theoretical framework adopted for this study is the weak lexicalist hypothesis. This study found that assimilation, vowel elision and coalescence are the possible alterations which occur at the syntactic level of fused compounding in Yorùbá. This study concludes that fused compounding only surfaces in Noun + Noun (N+N) Noun + Noun + Noun (N+N+N), Affix + Verb + Noun (AFX+V+N) and Verb + Noun (V+N) combinations in the language.

*Keywords*---Compounding, Fused compounds, Lexicosyntactic and Alteration, Yoruba.

### Introduction

Yorùbá belongs to West Benue-Congo of the Niger-Congo Phylum of African Languages (Williamson & Blench, 2000). It is spoken in the southwest region in states such as Oyo, Ogun, Osun, Ondo, Ekiti, Lagos, Kogi and Kwara States in Nigeria. Following Wikipedia (2021), the language is spoken by 52 million people in the whole world of which, about 50 million are native speakers while 2 million are non-natives. There are Yorùbá speakers in countries like Benin, Togo, Ghana, Cote D'ivoire, Sudan, Sierra Leone, the United Kingdom, Brazil and the United State of America. It has various varieties (dialects), part of which are: Ò yó, Èkìtì, Ìjè bú, Ré mo, Ifè, Ìjè s à, Àkókó, Ìkálè, Okun, Ègbá, Àwórì, Ìgbómìnà, Ò wò, Ìdànrè, Ègbádò, Ìlàje, Kétu, Òndó, Yewa, Ànàgó, Ìbò ló among others.

Yorùbá is one of the three National languages in Nigeria alongside Hausa and Igbo. Yorùbá is not a single group but a collection of diverse people bound together by a common language, history, and culture. It is the most documented African language, studied at home and abroad at all levels of education; used as a medium of instruction in early primary education, taught as a subject in secondary school and also offered as a regular degree programme in tertiary institutions. It is used in media (journals, newspapers, news, music etc). Yorùbá is a language of trade in the southwest where it is widely spoken by both native and non-native speakers.

The significance of this study cannot be overemphasized; it enlarges the coast of fused compounds in Yorùbá because previous studies on Yoruba compounding pay less attention to fused compounds. However, this aspect is the central focus of the study. It provides copious data on three roots collocation in Yorùbá compounds, which were not explicit in the previous studies. It presents the different alterations that can occur at the syntactic level of fused compounding (Dam-Jensen & Zethsen, 2007). It will serve as reference material for researchers who are working on this line, particularly the Yoruba language. It will contribute to the application of the weak lexicalist hypothesis in the context of Yoruba data.

Finally, it contributes to the documentation of the morphological aspect of Yoruba. Compounding is a word formation process where words are formed from the combinations of two or more independent lexical items in a language. The lexical items can be two or more basic nouns or a basic noun and another one derived from a verbal base. The possible combinations can be Noun + Noun Compound, Noun + Verb Compound, Adjective + Noun Compounds, Noun + Noun + Noun, Nominal Prefix + Verb Phrase, and Desententialization of Clauses and Sentences Respectively. Yorùbá, the language of study attest to compound. This study follows Ilori's classification of compounding; i.e fused and non-fused. However, this study focuses on the lexicosyntactic analysis of fused compounding in Yoruba using the weak lexicalist hypothesis as the theoretical framework.

# Compounding

Compounding is one of the word formation processes that are common to many languages of the world. This is an occurrence where two or more words are joined together to form a new word from the existing word which either changes or maintains the word class of the derived word. Omachonu & Abraham (2012), made it known that compounding is one of the two major means of creating new words, especially lexical categories such as nouns, verbs and adjectives in a language. This means that the derived word can maintain its class or change to another class of word in a language. Also, the newly derived compounds can never fall into any other class of word order than nouns, verbs and adjectives.

According to Arokoyo (2017), Compounding is a morphological process in which two or more separate words are combined to form a new compound word. The meaning of the new word is not extremely predictable on the components that make up the word in isolation. Udoh et al. (2019), assert that compounding is a process of combining two or more independent words to form a single word. This means it is the process of joining or merging two or more meaningful words in isolation to form another lexicon in a given language. Ilori (2010) opines that compounding is a morphological process in which two root words are combined to derive a new compound word. Ilori's definition of compounding only mentions two words whereas some compounds can be formed with more than two roots, examples of such can be seen in Yorùbá. e.g.,

```
1a. i. e s in + inú + ìwé → 'e s innúwèé' horse + inside + book 'impotent'
ii. o kò + ojú + omí → o kò júomi motor + eye + water 'canoe'
```

He further his explanation that desententialization is one of the ways of forming compounds in many languages where the syntactic component of grammar feeds the morphology of a language. According to him, this process is highly productive in forming common personal names in Yoruba. e.g.,

```
1b. i. o mo + ni + o lá → 'o mo lo lá'
Child + is + wealth 'name'
ii. olá + wo + ilé → 'o láwo lé' wealth + enter + house 'name'
```

In view of Booij (2007), compounding or composition which is the most frequently used means of producing new lexemes has its overall defining property as consisting of the combination of lexemes into larger words. Lieber & Stekauer (2011), explained that in spite of the fact that compounding is common to languages and despite the overwhelming huge volume of literature available on compounds and compounding

processes in language, it is still quite appropriate to observe that there are hardly any universal accepted criteria for determining what a compound is in terms of definition headedness and demarcation between compounds and similar grammatical structure.

Fabb (2001), in Omachonu (2012), asserts that compounds are subject to phonological as well as morphological processes which may be language specific or specific to compounds. However, assimilation, vowel elision, coalescence, alternation and suprasegmental features like tone, stress and intonation play a very noteworthy role in identifying and distinguishing compounds from noun phrases in some languages which apply to the language of the study.

# Types of Compounding

Many scholars have classified compounding into different types, Ilori (2010) classifies it into Fused and Non Fused, Omachonu & Abraham (2012), classify compounding into Nominal, Verbal and Synthetic among others. This study follows Ilori's classification of compounding; which is fused and non-fused based on the process that occurred during the formation at the syntactic level.

Ilori (2010), describes fused compounds as words whose primary root morphemes are phonologically knitted together through word boundary phenomena such as vowel elision and assimilation which serves as a form of relationship between morphology and syntax. e.g.,

Yoruba:

```
3a. i. ori + òkè → orókè head hill 'hilltop' ii. omi + oje

→ omije

water sap 'tears'
```

Examples Adapted from Ilori (2010)

Non-fused compounds on the other hand do not join roots together with any form of alteration that is, there is neither vowel elision nor assimilation while forming such compound words.

```
Yoruba:
3b. ilé + ejo. → ilé-ejo. house case 'court'
Adapted from Ilori (2010)
```

Taiwo (2009), examines the structure of Yoruba compound words using the weak lexicalist hypothesis which claims that some words are syntactically derived while others are not. He made use of Pulleyblank and Akinlabi (1988) view which posits two morphological components which are Morphology 1 and Morphology 2

Morphology 1 is the input to the syntax. Words are joined together in this stage to form a basic clause, new words are mostly formed from this clause. While trying to form a word from the basic clause, different phonological process/alteration occurs before the new word is derived; this leads to the next stage:

Syntax 
$$\rightarrow$$
 Morphology 2

Let's consider the examples below to see the movement from sentence to word; adé kún ilé → Adékúnlé (personal name) crown full house 'We have many crowns'

This shows the relationship that exists between morphology and syntax, which serves as input for one another. Taiwo (2013), investigates the morphology syntax interaction in the derivation of nominal compounds in Yorùbá. He records that many Yorùbá compounds are derived from clauses. He explains further on how phonological processes are employed when words are formed. In his view, Yorùbá exhibits endocentric and exocentric compounds. The combinations for deriving compound nouns in Yorùbá were examined, which are: noun + adjective, noun + noun (+noun), noun + verb, nominal prefix + verb phrase (endocentric compound) and desententialization of clauses and sentences.

He explained further that 'when a compound noun is formed, verbs are incorporated into a noun which makes the verb loses its categorial status at the syntactic level'. How most personal names are derived from the basic sentence is examined within the context of his study. Taiwo (2013), pointed out how compound nouns are also derived from focus constructions, dislocated sentences, and relative clauses and before the compound nouns can be formed, they must pass through the following syntactic and phonological processes: movement, insertion, deletion and contraction.

Underlying Sentence: Ope 'ye e ru Movement & Insertion Rules: O pe i ni ói ye e ru

Deletion Rule:

Ope \_\_ni ó ye e ru
Ope \_\_ni ó ye e ru
Ope \_\_ló ó ye e ru
Ope \_\_ló ó ye e ru

Desententialization/Compound Noun: Ope lóyeru

Example Adapted from Taiwo (2013)

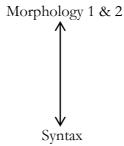
The review done so far reveals the possible interaction between morphology and syntax in forming compounds from an existing word, which means, the syntactic input is needed in the formation of compounds that allows the recursion from syntax into morphology. The present study also adopts the lexicalist hypothesis to discuss the alterations in the formation of fused compounds in Yorùbá.

### Theoretical Framework

The weak lexicalist hypothesis is adopted for the analysis of the study. The weak lexicalist hypothesis allows eclectic morphological operation in the syntax, either inflectional or derivational. It can be linked with Chomsky 1970 'Remarks on Nominalisation' which shows that certain word formation processes happen at the pre-syntactic level of lexicon while other processes occur at the syntax level.

According to Spencer (1991), Chomsky argued that transformations should capture regular correspondences between linguistic forms, and the idiosyncratic information belonging to the lexicon-derived nominalisations are morphologically, syntactically and semantically idiosyncratic. Scholars working within the framework of weak lexicalist hypothesis believe that derivation and inflection are different morphological processes. The difference between derivation (affixation) and inflection is a matter of order but of the same operation. Inflection is a problem for the strong lexicalist model (Wang et al., 2019).

Taiwo (2009), affirms that morphology provides input for the syntax; it is also possible for the syntax to derive a word-level category. He adopted the model of Pulleyblank & Akinlabi (1988).



Pulleyblank and Akinlabi (1988, p. 158)

In considering the possible in teraction between morphology and syntax, the model above posits two morphological components, Morphology 1 and Morphology 2. This is illustrated below:

The word ifé 'love' is derived from the combination of an agentive nominal prefix 'i' and 'fe '

'want'

b. ife wù mi love like me

'I like love'

Morphology 1 is the input to syntax

Morphology  $1 \rightarrow Syntax$ 

Words are strung together to form a basic clause. It is possible to derive a word from the words in the clause above.

```
 c. ifé wù mi → lfe wùmi
 Syntax → Morphology 2
```

The syntactic component of the model above determines the well-formedness of syntactic representations before the postsyntactic compound is derived. Pulleyblank and Akinlabi's model is one in which all word formation processes are located within a single grammatical component.

Justification for Adopting Weak Lexicalist Approach

The weak lexicalist hypothesis is adopted for the analysis of this study due to its universality in word formation. Considering the data for this study, it shows that the weak lexicalist hypothesis suits the analysis because the formations of fused compounds involve the interaction of both syntactic and morphological components. This framework focuses on word formation in a language which is the central idea of the study showing the recursion of syntax to morphology. However, since the theory deals with derivational processes, this study, therefore, makes use of it to analyse the different alterations that occur in the formation of the fused compound in the language of the study (Lawal et al., 1997).

# Research Methodology

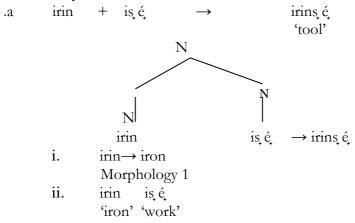
The data for this study were gathered through introspection since the writer is a native speaker of the language of study and, of course, these data were validated by other native speakers of Yorùbá. Also, some data were derived from previous related literature. The weak lexicalist hypothesis is used for the analysis of the study.

# Data presentation and analysis

## Data group A 'N + N' Combination

```
Group A1 'alteration through elision' i. irin + is é
                                                      \rightarrow irins é
              iron + work
                                'tools'
                          → omijé water + sap
                                                         'tears' iii. oju + ilé
              + oié
             'ojulé eyes + house
                                      'house number'
             ìvà + ilé
                                   iyalé
       iv.
                                   'senior wife'
             mother + house
                                  avaba wife + king
              ava + o ba
                                                            'queen' vi. o mo +
       v.
              obinrin → o mo binrin
              child + female
                                  'daughter'
```

# Data Analysis of 'N + N' Collocation with elision alteration



The noun 'irin' selects and merges with the noun 'is, é, ' to form a noun phrase at the syntactic level.

iii. 
$$irin + is \notin \rightarrow irins \notin 'iron' 'work'$$
 'tool'

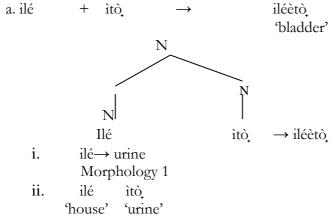
The noun phrase is lexicalised in Morphology 2 in the process of deriving the compound noun 'irins é,', the first vowel of the second noun /i/ is elided before the compound noun 'irins é,' is formed.

Two different nouns are joined together to form a new word which also gives a noun. During this process, the second vowel is deleted before the new word is derived or the two words come out without any form of alteration.

In the derived compound words above,  $N_1$  is the head in each construction while  $N_2$  is the modifier. The tree diagram above shows the structure of each of the compound words.

# Group A2 'alteration through assimilation'

# Data Analysis of 'N + N' Collocation with assimilation alteration



The noun 'ilé' select and merges with the noun 'itò,' to form a noun phrase at the syntactic level

The noun phrase is lexicalised in Morphology 2 in the process of deriving the compound noun 'iléètò,', the first vowel of the second noun /ì/ assimilates the final vowel of the first noun before the compound noun 'iléètò,' is formed.

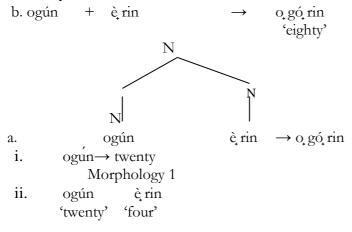
Syntax 
$$\rightarrow$$
 Morphology 2

Two different nouns are joined together to form a new word which also gives a noun. During this process, the second vowel assimilates the features of the final vowel of the first word before the new word is derived. In the derived compound words above,  $N_1$  is the head in each construction while  $N_2$  is the modifier. The tree diagram above shows the structure of each of the compound words.

# Group A3 'alteration through coalescence'

v. ogún + è fà  $\rightarrow$  o gó fà twenty + six 'one hundred and twenty' vi. ogún + è san → twenty + nine 'one o gó sán hundred and eighty' vii. ogún + è ta  $\rightarrow$ twenty + three o gó ta 'sixty' viii. ogun + èje → ogóje twenty + seven 'one hundred and forty'

# Data Analysis of 'N + N' Collocation with coalescence alteration



The noun 'ogún' select and merges with the noun 'è rin' to form a noun phrase at the syntactic level

Morphology 1 
$$\rightarrow$$
 Syntax iii. ogún + è rin  $\rightarrow$  o gó rin 'twenty' 'four' 'eighty'

The multiple counting is lexicalised in Morphology 2, in the process of deriving the compound noun 'o, gó, rin', the two vowels  $/\tilde{\mathbf{u}}/$  and  $/\epsilon$  / in the boundary coalesce to  $/\mathfrak{d}$  / before the compound noun 'o, gó, rin' is formed.

Syntax 
$$\rightarrow$$
 Morphology 2

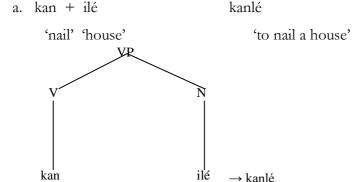
Two different nouns are joined together to form a new word which also gives a noun. During this process, the two vowels in the boundary coalesce into another vowel before the compound noun is derived. In the derived compound words above,  $N_1$  is the head in each construction while  $N_2$  is the modifier. The tree diagram above shows the structure of each of the compound words.

# Data Group B

# 'V+N' Collocation

- i.  $ra + e_j ja \rightarrow re_j ja buy + fish$  'to buy fish'
- ii.  $gbin + is u \rightarrow gbins u plant + yam$  'to plant yam'
- iii. kan + ilé → kanlé nail + house 'to roof a house'
- iv. gbá + ìlè  $\rightarrow$  gbálè sweep + ground/floor 'to sweep the ground/floor'

# Data Analysis of 'V + N' Collocation with elision alteration



- i. kan→ nailMorphology 1
- ii. kan ilé 'nail' 'house'

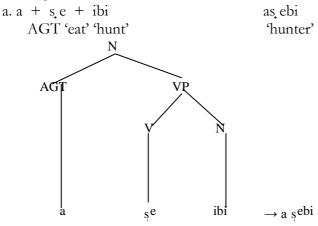
The verb 'kan' selects and merges with the noun 'ilé' to form a verb phrase at the syntactic level. Words are strung together to form a compound word.

The verb phrase is lexicalised in Morphology 2 in the process of deriving the verbal compound 'kanlé', the V<sub>2</sub> /i/ is elided before the new word is formed.

A verbal compound is formed when a verb is joined to a noun to form a verb. It is either the two words are not altered (non-fused) or the first vowel is deleted before the new word is formed.

### Data Group C

# Data Analysis of 'AFFX + V + N' Collocation with elision alteration



The verb 's e' select and merges with the noun 'ibi' to form a verb phrase at the syntactic level, an agentive prefix is attached to the phrase which changes its class to a noun phrase

### AGT 'do' 'evil' 'evil doer'

The noun phrase is lexicalised in Morphology 2 in the process of deriving the compound noun 'as ebi', the vowel /i/ in the second word 'ibi' is deleted in the process of forming a new word.

Morpheme 'a-' which denotes agent is attached to a verb phrase to derive a noun, it nominalises the verb. When these nouns are formed it is either there is a deletion of a vowel or not in the existing word, the elision affects mostly the V<sub>2</sub> vowel in this context. A nominal compound is derived from a verb phrase as mentioned above; the verb and its object are nominalized when an agentive prefix is attached to it. The nominal prefixes are the heads in these structures; this is because they change the class of the base from VP to N, as described with the aid of the diagram above.

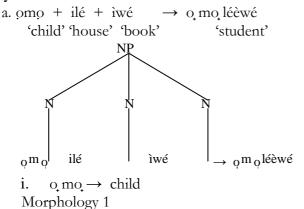
# Data Group D

## N + N + N Collocations

# Group D1. 'N + N + N' Collocation with elision and assimilation alteration

- o mo + ilé + iwé → o mo léèwé child + house + book 'student' i.
- omi + inu +igi → ominuugi water + inside + tree 'latex' ii.
- e s in + inú + iwé -> e s innúùwé horse + inside + book 'impotent'
- iv.
- $o_{k}\dot{o}_{k} + o_{j}\dot{u} + irin \rightarrow o_{k}\dot{o}_{k}\dot{u}$ iurin motor + eye + iron 'train' e ja + inu + ibu  $\rightarrow$  e januubu fish + inside + pool 'oceanic fish'

# Analysis of 'N + N + N' Collocation with elision and assimilation alteration



ii. omo ilé iwé→ o mo léèwé 'child' 'house' 'book' 'student'

The noun 'omo' selects and merges with two nouns 'ile' and 'iwe' to form a noun phrase at the syntactic level, where words are strung together to form a compound word.

The noun phrase is lexicalised in Morphology 2 in the process of deriving the compound noun 'o mo léèwé',  $V_2$  /i/ is elided in the first boundary while  $V_2$  /i/ in the second boundary assimilate the features of  $V_1$ /e/ before the new word is formed.

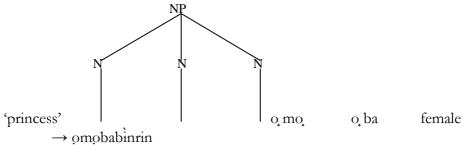
Three different nouns are combined to form a compound noun. The first vowel of the second noun is elided and the first vowel of the third noun assimilates the features of the final vowel of the second noun before the compound word is derived.

# Group D2 'N + N + N' Collocations with elision(s)

- i.  $\grave{e}_{,} \acute{e}_{,} \acute{d}\acute{e}_{,} + igba + \grave{e}_{,} ta \rightarrow \grave{e}_{,} \acute{e}_{,} \acute{d}\acute{e}_{,} gb\grave{e}_{,} ta$   $-100 + 200 + 3 \qquad `500'$
- ii. è é dé + igba + è rin → è é dé gbè rin
  -100 + 200 + 4 '700' iii. o kò + ojú + omi → okò júomi motor + eye + water 'boat'
- iv. omo + oba + o kunrin → omobakunrin child + king + male 'prince'
- v. omo + oba + obinrin → omobabinrin child + king + female 'princess'
- vi. omo + iya + okunrin → omoy akunrin child + mother + male 'brother'
- vii. omo + iya + obinrin → omoy abinrin child + mother + female' 'sister'
- viii. omo + omo + okunrin → omomokunrin child + child + male 'grandson'
- ix. omo + omo + obinrin → omomobinrin child + child + female' 'granddaughter'

# Analysis of N + N + N Collocation with elisions alteration

a. omo + o ba + obinrin → omobabinrin 'child' 'king' 'female'



- i.  $o, mo \rightarrow child Morphology 1$
- ii. omo o ba obinrin → omobabinrin 'child' 'king' 'female' 'princess'

The noun 'omo' selects and merges with two nouns 'o ba' and 'obinrin' to form a noun phrase at the syntactic level, where words are strung together to form a compound word.

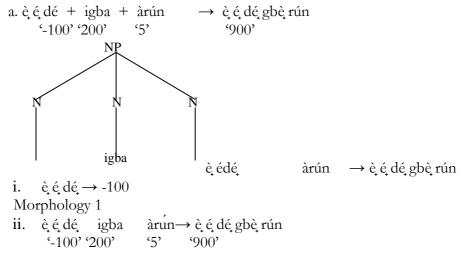
The noun phrase is lexicalised in Morphology 2 in the process of deriving the compound noun 'omobabinrin', one of the  $V_1,V_2$  /o/ is elided in the first boundary and  $V_2$  /o/ in the second boundary is elided before the new word is formed.

Three different nouns are combined to form a compound noun. One of the vowels in the first boundary of the first and second nouns is elided and the first vowel of the third noun is elided before the compound word is derived.

# Group D3 'N + N + N' Collocation with elision and coalescence

i. è é dé 
$$+$$
 igba  $+$  àrun  $\rightarrow$  è é dé  $+$  gbè run  $-100 + 200 + 5$  '900'

# Analysis of 'N + N + N' Collocation with elision and coalescence



The noun 'è é dé 'selects and merges with two nouns 'igba' and 'àrún' to form multiple numerals at the syntactic level, where words are strung together to form a new word.

Morphology 
$$1 \rightarrow Syntax$$

The noun phrase is lexicalised in Morphology 2 in the process of deriving the compound noun 'è é dé gbè run',  $V_2$  /i/ is elided in the first boundary while  $V_1$  and  $V_2$ ; /a/ and /à/in the second boundary coalesce to  $/\epsilon$ / before the new word is formed.

Syntax 
$$\rightarrow$$
 Morphology 2

Three different nouns are combined to form multiple figures in Yoruba numerals. The first vowel of the second noun is elided while the vowels at the second boundary coalesce to another vowel before the compound word is derived (Vega-Mendoza et al., 2024).

# Discussion of Findings

Having studied the data presentation and analysis of this study, the following findings are revealed as the outcome of the lexicosyntactic analysis of fused compound in Yoruba;

- 1) The fused compounds in Yoruba can only surface in the combinations like N+N, V+N, AFFIX + V +N, V+N and N+ N +N.
- 2) Elision and assimilation are the major alteration processes that occur in the derivation of fused compounds in the language.
- 3) Coalescence alteration process only surfaces in rare occasions of deriving Yoruba multiple numerals
- 4) Two alteration processes occur at the syntactic level of combinations of three independent nouns as seen in Data groups D1, D2 and D3 except datum D2iii that has only one alteration in the formation.

### Conclusion

This study examines the lexicosyntactic analysis of fused compounds in Yoruba under the framework of the weak lexicalist hypothesis. The concept of compounding was discussed in relation to the previous study on compounding and its various types as posited by various scholars. This study follows the Ilori (2010), classification which classifies compounding to fused and non-fused. Elision and assimilation are the major alterations which occurred in the formation of the fused compound at the syntactic level in the language while alteration through coalescence surfaced in a few contexts in the language. However, the fused compounding only surfaced in Noun + Noun (N+N) Noun + Noun + Noun (N+N+N), Agentive (prefix) + Verb + Noun (AFFIX+V+N) and Verb + Noun (V+N) combinations in the language.

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