

SOME YORUBA QUANTIFIER WORDS AND SEMANTIC INTERPRETATION

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This paper examines the need to look at quantifiers from semantic perspectives unconnected with logical, existential, or universal claims. The focus here is on the quantifier 'many' in Yoruba. Among other observations it is noted that the Yoruba quantifier ọ̀pọ̀|ọ̀pọ̀ 'many' may occur only with those NPs that are viewed as animate.

1. Introduction

Quantifiers have been the subject of considerable discussion in recent linguistic theory. Unfortunately, much of the work has focused on logical analyses and universal or existential claims. One of the few attempts made to examine the secondary semantic properties of quantifiers (assuming that calling a quantifier "universal" or "existential" can be considered a primary property) is that of McCawley [1977]. McCawley identifies the contribution of different quantifiers to the semantic interpretation of sentences and establishes a number of criteria. This paper examines another set of criteria not found in English which affects the interpretation of quantified sentences.

2. Morphology

Yoruba has four morphological encodings for the quantifier 'many'. These are ọ̀ , ọ̀pọ̀ , ọ̀pọ̀ , and ọ̀pọ̀|ọ̀pọ̀ . This choice of different forms has semantic implications. However, before we go into that it is first necessary to examine their possible derivational source.

Of these four words having the meaning 'many' the most primary is ọ̀ , all the other three can be said to be derived from it. This assumption is based on the following facts: Firstly, the other three words, namely, ọ̀pọ̀ , ọ̀pọ̀ , and ọ̀pọ̀|ọ̀pọ̀ contain the word ọ̀ . The word ọ̀ is thus a common denominator for all. The second piece of evidence comes from word formation

rules in Yoruba. Yoruba has the characteristic of forming nouns from verbs and from other nouns. This is done through various processes the most notable of which are by prefixing and reduplication.

Prefixing: A nominalising prefix may consist of a single vocalic element. The prefixes are o-, ọ-, e-, ẹ-, i-, and a-. Following are examples of nouns formed through this process from Awobuluyi [1978]:

ì-bínú	'anger'	from the verb	bínú	'to be angry'
ì-murá	'preparation'	from the verb	murá	'to prepare'
ọ-gbọ̀n	'wisdom'	from the verb	gbọ̀n	'to be wise'
o-gbó	'old age'	from the verb	gbó	'to be old'
a-gò	'folly'	from the verb	gò	'to be stupid'
è-gbè	'chorus'	from the verb	gbè	'to chorus'

Reduplication: There are two main types of reduplication. The first, which is known as "partial" reduplication, involves taking the first consonant of the verb, adding the prefix i-, and prefixing the resultant to the verb.

ííọ	'act of going'
rírà	'act of buying'
sísùn	'act of sleeping'
kíkà	'act of reading'

The second type of reduplication, which is called "total" reduplication, involves repeating a complete word. Examples of such words are:

ọ̀sẹ̀ - ọ̀sẹ̀	'weekly'
ẹ̀gbẹ̀ - ẹ̀gbẹ̀	'edge'
lẹ̀hìn - lẹ̀hìn	'far behind'

This type of reduplication denotes emphasis. Sometimes a word linker is interposed between the parts of the word reduplicated. The two main linkers are -ní, and -kí. These are exemplified below:

enikẹni	(ẹni kí ẹni)	'anybody'
chunkóhum	(ohun kí ohun)	'anything'
àgbàlagbà	(àgbà ní àgbà)	'elderly'

Several phonological rules may affect such derived words. For instance, it can be seen from the above words that the *-i* of the linkers *-kí* and *-ní* above have been omitted. This is a result of a contraction rule existing in the language: when a word ending in a vowel is followed by another beginning with a vowel one of the two vowels, usually the first, is dropped [Bamgboṣe 1965]. This results in a contraction of the two words. This explains the absence of *-í* in *ohunkóhun*, *ḗnikèni*, and *àgbàlagbà* above.

Another phonological rule affecting the derived words is the *n* and *l* alternation rule. The consonants [n] and [l] are in complementary distribution. This rule has been examined in detail in Awobuluyi [1968]. Their occurrence is determined by the following sound. The consonant [n] occurs immediately preceding a nasal vowel while [l] occurs before oral or non nasal vowels. This explains why we have *àgbàlagbà* and not *àgbàlagbà*. From the above evidence *ṣṣṣ* can be said to be derived from *pṣṣ* by the addition of the prefix *ṣ-* to *pṣṣ*. This type of prefixing applies mainly to verbs, and a study of the behaviour of the word *pṣṣ* shows that *pṣṣ* is a verb.

Pṣṣ occurs in predicate position:

- (1) *ṣṣṣ ṣṣ ṣṣ ní Fìdítì* 'oranges are many at Fiditi'
oranges ASP many at Fiditi

The other three quantifiers cannot occur in predicate position:

- (2) **ṣṣṣ ṣṣ púpṣṣ ní Fìdítì*
oranges ASP many at Fiditi
(3) **ṣṣṣ ṣṣ ṣṣṣ ní Fìdítì*
oranges ASP many at Fiditi
(4) **ṣṣṣ ṣṣ ṣṣṣ|ṣṣṣ ní Fìdítì*
oranges ASP many at Fiditi

Like a true verb *pṣṣ* cannot occur in nominal position:

- (5) **ṣṣṣ pṣṣ wà ní Fìdítì* 'there are many oranges at Fiditi'
oranges many are at Fiditi
(6) *ṣṣṣ púpṣṣ wà ní Fìdítì*
oranges many are at Fiditi
(7) *ṣṣṣ ṣṣṣ wà ní Fìdítì*
many oranges are at Fiditi

- (8) ọ̀pọ̀lọ̀pọ̀ ọ̀sàn wà ní Fìdítì
many oranges are at Fiditi

It can be seen from the above that púpọ̀, ọ̀pọ̀lọ̀pọ̀, and ọ̀pọ̀ are nominals while pọ̀ is verbal. The verbal characteristics of pọ̀ support our claim that ọ̀pọ̀ is derived from pọ̀ by prefixing.

The derivation of ọ̀pọ̀lọ̀pọ̀ and púpọ̀ can be attributed to the second type of word formation process, reduplication. Ọ̀pọ̀lọ̀pọ̀ is derived by total reduplication of ọ̀pọ̀ and the insertion of the linker ní. This yields ọ̀pọ̀níọ̀pọ̀. Then contraction of the vowel í and the n and l alternation rule changes ọ̀pọ̀níọ̀pọ̀ to ọ̀pọ̀lọ̀pọ̀.

Finally we consider the derivation of púpọ̀. Púpọ̀ too can be traced to the process of reduplication but this time the reduplication process is partial. In partial reduplication, only the initial consonant sound of the word is copied. This is followed by the insertion of í. First, the initial consonant of pọ̀ is copied followed by the insertion of í after the copied consonant. This results in pípọ̀. The occurrence of u rather than í in púpọ̀ may be attributed to vowel harmony which exists in Yoruba. (For more on vowel harmony see Bangbose [1976] and Oyelaran [1971].)

3. Syntactic Features

Although morphologically related, there exist certain syntactic and semantic differences among these words. As mentioned earlier pọ̀ differs syntactically from the other three in that it only occurs in predicative positions while the other three ọ̀pọ̀, ọ̀pọ̀lọ̀pọ̀, and púpọ̀ occur in nominal positions:

- (9) *è̀nìyàn án pọ̀ lọ̀ ibi ìkórè náà
people ASP many went place-of festival the
- (10) è̀nìyàn púpọ̀ ọ̀ lọ̀ ibi ìkórè náà
people many ASP went place-of festival the
'many people went to the festival'
- (11) ọ̀pọ̀lọ̀pọ̀ è̀nìyàn án lọ̀ ibi ìkórè náà
many people ASP went place-of festival the
'many people went to the festival'

- (12) ọ̀pọ̀ ènìyàn án lọ ibi ìkórè náà
 many people ASP went place-of festival the
 'many people went to the festival'

Example (9) can be grammatical if we change the construction to that of a relative clause:

- (9') ènìyàn tí ó lọ ibi ìkórè náà án pọ
 people that they went place-of festival the ASP many
 'the people that went to the festival were many'

But the other three cannot occur in a relative clause construction.

- (10') *ènìyàn tí ó lọ ibi ìkórè náà púpọ
 people that they went place-of festival the many
 'the people that went to the festival were many'
- (11') *ènìyàn tí o lọ ibi ìkórè náà ọ̀pọ̀lọ̀pọ̀
 people that they went place-of festival the many
 'the people that went to the festival were many'
- (12') *ènìyàn tí ó lọ ibi ìkórè náà ọ̀pọ̀
 people that they went place-of festival the many
 'the people that went to the festival were many'

Pọ̀ in this sense behaves like English 'many'.

Consider the English sentences below:

- (13) Many people attended the reception.
 (14) The people that attended the reception were many.

In (13) *many* is in a nominal position while in (14) it is in a predicative position. The difference between English and Yoruba here is that whilst English uses the same word for both positions, Yoruba uses different words.

What these syntactic characteristics indicate is that pọ̀ is in a different class from ọ̀pọ̀, ọ̀pọ̀lọ̀pọ̀, and púpọ̀. We shall classify pọ̀ as a predicative quantifier. Our attention will therefore be focused on the other three which show nominal characteristics.

Púpọ̀ differs in certain respects from ọ̀pọ̀ and ọ̀pọ̀lọ̀pọ̀. One of these differences is that of syntactic position. Púpọ̀ has relative freedom of posi-

tion as compared to ọ̀pọ̀ and ọ̀pọ̀|ọ̀pọ̀ in the sense that it can precede or follow the noun. The others can only precede their nouns.

- (15) a. wọ̀n fún púpọ̀ wa ní ìwé 'they gave many of us books'
 they gave many of-us prep books
 b. wọ̀n fún àwa púpọ̀ ní ìwé 'they gave many of us books'
 they gave us many prep books
- (16) a. wọ̀n fún ọ̀pọ̀|ọ̀pọ̀ wa ní ìwé 'they gave many of us books'
 they gave many of-us prep books
 b. *wọ̀n fún àwa ọ̀pọ̀|ọ̀pọ̀ ní ìwé
 they gave us many prep books
- (17) a. wọ̀n fún ọ̀pọ̀ wa ní ìwé 'they gave many of us books'
 they gave many of-us prep books
 b. *wọ̀n fún àwa ọ̀pọ̀ ní ìwé
 they gave us many prep books

However, all three quantifiers can be used partitively. This is illustrated below:

- (18) mo mo púpọ̀ nínú àwọn ọ̀mọ̀ ilé-ìwé tí ń gbé ọ̀gbà
 I know many of them students that ASP live campus
 'I know many of the students that live on the campus'
- (19) mo mo ọ̀pọ̀ nínú àwọn ọ̀mọ̀ ilé-ìwé tí ń gbé ọ̀gbà
 I know many of them students that ASP live campus
 'I know many of the students that live on the campus'
- (20) mo mo ọ̀pọ̀|ọ̀pọ̀ nínú àwọn ọ̀mọ̀ ilé-ìwé tí ń gbé ọ̀gbà
 I know many of them students that ASP live campus
 'I know many of the students that live on the campus'

4. Semantic Features

A number of semantic differences can also be found to exist among the three quantifier words. This can be seen if we contrast the quantifiers in similar sentences:

- (21) ọ̀pọ̀ ènìyàn lọ ibi ìgbéyàwó náà
 many people went place-of wedding the
 'many people went to the wedding'

- (22) ọ̀pọ̀lọ̀pọ̀ ènìyàn lọ ibi ìgbéyàwó náà
 many people went place-of wedding the
 'many people went to the wedding'
- (23) ènìyàn púpọ̀ lọ ibi ìgbéyàwó náà
 people many went place-of wedding the
 'many people went to the wedding'

The above sentences are not synonymous. The first difference relates to set size. The size of the set referred to by ọ̀pọ̀ for instance, is larger than that referred to by púpọ̀. Ọ̀pọ̀ is used when the number is very large. There is an additional implication, which is that the number is excessively large, i.e. beyond normal expectations. This additional connotation is absent in (23), which simply means the number was large, i.e. many people went. Ọ̀pọ̀lọ̀pọ̀ is the largest of the three in terms of set size. In addition to it being the largest it is also used for emphasis. This interpretation of ọ̀pọ̀lọ̀pọ̀ is in line with its derivation. As we noted earlier ọ̀pọ̀lọ̀pọ̀ is derived from ọ̀pọ̀ through total reduplication of ọ̀pọ̀, and in Yoruba reduplication is one of the means used for conveying emphasis. Thus (22) is more emphatic than (21).

The above can be denoted succinctly in set notation as

$$ọ̀pọ̀lọ̀pọ̀ \supset ọ̀pọ̀ \supset púpọ̀ .$$

Another difference that exists between ọ̀pọ̀lọ̀pọ̀, púpọ̀, and ọ̀pọ̀ is that of variety. With púpọ̀ and ọ̀pọ̀ the emphasis is on the number or largeness of the set, whereas with ọ̀pọ̀lọ̀pọ̀ the emphasis is on the variety within the set. This difference affects the interpretation of the following sentences:

- (24) a. ọ̀pọ̀lọ̀pọ̀ ènìyàn lọ ibi òkú náà
 many people went place-of funeral the
 'many people attended the funeral'
- b. ọ̀pọ̀ ènìyàn lọ ibi òkú náà
 many people went place-of funeral the
 'many people attended the funeral'
- c. ènìyàn púpọ̀ lọ ibi òkú náà
 people many went place-of funeral the
 'many people went to the funeral'

The difference between (24a), (24b), and (24c) is not merely that of size or quantity, but also that of variety. (24a) does not just mean that there were many people, it also emphasises that the people were from different backgrounds or disciplines, for example, lawyers, bankers, engineers, teachers, etc. This implication is absent from (24b) and (24c). This distinction is not made by all languages which have reduplicated quantifiers. For example, Twi also has two morphological encodings of the quantifier 'many', *píi* and *bebree*. However, the difference between the two is mainly that of emphasis, *bebree* being more emphatic than *píi*, not different in variety.

Another related difference among the quantifiers is that of mass versus individual interpretation. In (24b) and (24c), where the quantifiers are *òpò* and *púpò* respectively, the interpretation is that of an undifferentiated mass of people. The implication is that it is impossible to identify individual guests. In (24a), on the other hand, many of the people can be recognized. In fact, this is a necessary condition demanded by *òpò|òpò*. *Òpò|òpò* is used only when the objects or persons are recognizable and distinguishable by the speaker. For example, if a friend wanted to tell me there was a large crowd at the wedding but she did not happen to know anybody there, the appropriate quantifier to use will be *púpò* or *òpò* (depending on the set size) rather than *òpò|òpò*. *Òpò|òpò* implies ability on the part of the speaker to be able to distinguish or recognize many of the individuals that comprise the set. Hence (24a) can elicit a question like (25):

- (25) *àwọn wo ní o rí ní bẹ?* 'who did you see there?'
 they who be you saw at there

The speaker can then go on to enumerate some of the people like I saw A, B, C, etc. But a similar sentence with *púpò* or *òpò* will not elicit such a question.

A third factor that influences the choice of quantifier word which seems to relate to the earlier two criteria is the criterion of animacy. Yoruba makes a distinction within NPs. One way in which this distinction is manifested is in the use of certain quantifier words. Certain NPs are treated as being higher in animacy than others. NPs that are regarded as higher in animacy are quanti-

fied by ọ̀pọ̀lọ̀pọ̀ while those that are regarded as lower in animacy are quantified by either ọ̀pọ̀ or púpọ̀. Consider for example the sentences below:

(26) *ọ̀pọ̀lọ̀pọ̀ iyanrìn ló ẹ́ é po síbẹ̀ntì
 many sands be do INF mix cement
 'many sands can be used to mix cement'

(27) ọ̀pọ̀lọ̀pọ̀ igi ló ẹ́ é kọ̀ ilé
 many trees be do INF build house
 'many trees can be used to build a house'

The difference in acceptability between (25) and (26) is that in Yoruba society iyanrìn is viewed as lower in animacy while igi is viewed as higher in animacy.

The Yoruba data here agrees with Bernard Comrie's [1981:Chapter 9] observation on animacy. Bernard Comrie observed that the so-called animacy hierarchy is a combination of several factors. One of these is the factor of individuation. Individuated objects as Comrie points out are viewed by humans as being higher in animacy than less individuated objects. iyanrìn is inherently less individuated. For instance, it is difficult to distinguish one grain of sand from another. It is not surprising therefore that it is low in animacy and thus not qualified to be quantified by ọ̀pọ̀lọ̀pọ̀.

This animacy criteria does not however necessarily correlative with living and non-living things, i.e., whether an entity is a living object or a dead object. Consider for example the two sentences below:

(28) *ọ̀pọ̀lọ̀pọ̀ ẹ̀fọ̀n máa ń kú ní àsìkò ọ̀yẹ́
 many mosquitoes habitual die at time cold
 'many mosquitoes die during the cold weather'

(29) ọ̀pọ̀lọ̀pọ̀ èèrà máa ń kú ní àsìkò ọ̀yẹ́
 many ants habitual die at time cold
 'many ants die during the cold weather'

Sentence (28) is considered unacceptable while (29) is acceptable although the quantified NPs in both sentences are living objects. The difference in acceptability is due to the fact that èèrà is considered as high in animacy while ẹ̀fọ̀n is low in animacy. What seems to determine the animacy of an object in

Yoruba is whether or not the object is individuated.

In Yoruba èḥḥon 'mosquitoes' are not perceived as individuated objects because they are, to the Yoruba, undifferentiable, i.e. you cannot differentiate one èḥḥon from another, whereas èèrà is differentiable, e.g. in terms of size, form, colour or even smell, and therefore individuated. Thus èèrà can be quantified by òpòlòpò . Other examples that illustrate this point are the sentences below:

(30) wón kó òpòlòpò ìwé dà sí àjà
 they carried many books throw at loft
 'they threw many books in the loft'

(31) *wón kó òpòlòpò koríko dà sí àjà
 they carried many grass throw at loft
 'they threw many grass in the loft'

Here again the unacceptability of (31) is attributed to the fact that koríko is not individuated. However, if we substitute the quantifier in (31) with púpò or òpò the sentence becomes acceptable.

(31) a. wón kó koríko púpò dà sí àjà
 they carried grass many throw at loft
 'they threw a lot of grass in the loft'

b. wón kó òpò koríko dà sí àjà
 they carried many grass throw at loft
 'they threw a lot of grass in the loft'

Thus, òpòlòpò is used for human NPs and for non-human NPs and other objects that can be viewed as single individual entities.

5. Conclusions

From the above it can be concluded that objects that can take the quantifier òpòlòpò are those objects that are viewed as high in animacy while those that cannot occur with this quantifier are viewed as low in animacy. It is clear from this that quantifiers do contribute in many ways to the interpretation of sentences. However, the nature of this contribution may differ from one language to another. Although in this study we have concentrated mainly

on the use of the quantifier 'many', it is hoped that the above data from Yoruba adds to the point already made by McCawley [1977] of the need to examine quantifiers from semantic perspectives unconnected with universality or existentiality.

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