A Sociolinguistic Analysis of Plural Marking in Nigerian Pidgin English

By

Precious Isaac Affia

A thesis submitted to Faculty of Graduate Studies of the University of Manitoba for the fulfilment of the requirements for the degree of

Master of Arts

Department of Linguistics

University of Manitoba

Winnipeg

Abstract

This study examines plural marking in Nigerian Pidgin English (NPE) in light of language change. The plural marking strategies used in NPE are the morphological plural *-s*, postnominal *dem*, *zero* marking and *reduplication* of adjectives/nouns, double marking, numerals and quantifiers as analyzed in previous studies (Tagliamonte et al 1997, Ogunmodimu 2014). The idea for the language change analysis is that older studies show that *dem* or null marking are the most common plural marking strategies in NPE (Faraclas 1989, Mafeni 1971, Agheyisi 1971), while more recent studies (Tagliamonte et al. 1997, Ogunmodimu 2014) show that the plural marker *-s* is dominant in the language, while *dem* is disappearing. The current study arose from the question of the disappearance of *dem* as a plural marker in NPE as obtained from previous research. I believe an explanation for this disappearance could be that there is a change in the language as it relates to the use of plural markers. While previous studies have examined some linguistic and social factors that may influence the use of these markers (e.g. *-s* being sensitive to animacy and nominal reference (Tagliamonte et al. 1997) and *dem* to education (Ogunmodimu 2014), none of these works have looked at the variable- *plural marking* as a function of language change. In this thesis, I investigate age, gender and dominant language as factors that may influence the choice of plural markers used by NPE speakers in Winnipeg, Manitoba. I also investigate linguistic factors such as animacy, type of determiner and nominal reference, precipitated by a previous study by Tagliamonte et al. (1997). To better test for change in progress, the data of the study is collected through sociolinguistic interviews conducted in NPE, with 20 participants divided into two generations (older and younger) and gender (male and female) evenly distributed. All the speakers are immigrants in Winnipeg who have spent most of their lives in Nigeria to be able to acquire NPE. The results of the study suggest change in

progress occurring in plural marking from the older use of *zero* marking to newer -s marking, as -s is still the dominant plural used in this study. Gender, dominant language and the interaction of age and gender are found to be significant factors in the choice of plural used by the speakers. The result that dominant language is significant supports the hypotheses of previous literature (Tagliamonte et al 1997 and Ogunmodimu 2014).

Acknowledgements

I would like to first of all thank God for his grace and mercy upon my life. For helping me throughout the program and for the grace to complete it. He has been my rock through it all. I would not have come this far without his ever-dwelling presence and love.

I am so grateful to my able supervisor Dr. Nicole Rosen for all her help, moral support, directions, invaluable guidance, advice and patience with me. She is very remarkable, and I appreciate her for creating a comfortable environment for me to study and challenging me to do better. Without her leadership and support this completing this project would not have been possible.

I thank Dr. Verónica Loureiro-Rodriquez and Dr. Jila Ghomeshi, members of my committee, for their insightful questions and very helpful commentary. Their comments and guidance have helped improve the quality of my work, for that I am grateful.

I would like to acknowledge my colleagues, Lanlan Li, for assisting with the statistical analyses, Gabriel Escudero, for academic advice and being a good friend, Amani Makkawi and Trevor Sie for being amazing friends and colleagues. To all my colleagues for their support one way or another during these two years of study and to Heather Cherparko, I appreciate all their support and kindness.

I am also grateful to all the members of the Department of Linguistics, the Faculty of Arts, and the University of Manitoba; it has been a great experience.

I am finally grateful to my family members, Mr. and Mrs. Ubong Obot and Mr. and Mrs. Itoro Affia for playing a pivotal role in this journey. They have been very encouraging and helpful through it all.

Thank you,

Precious Affia.

Table of Contents

List of Tables

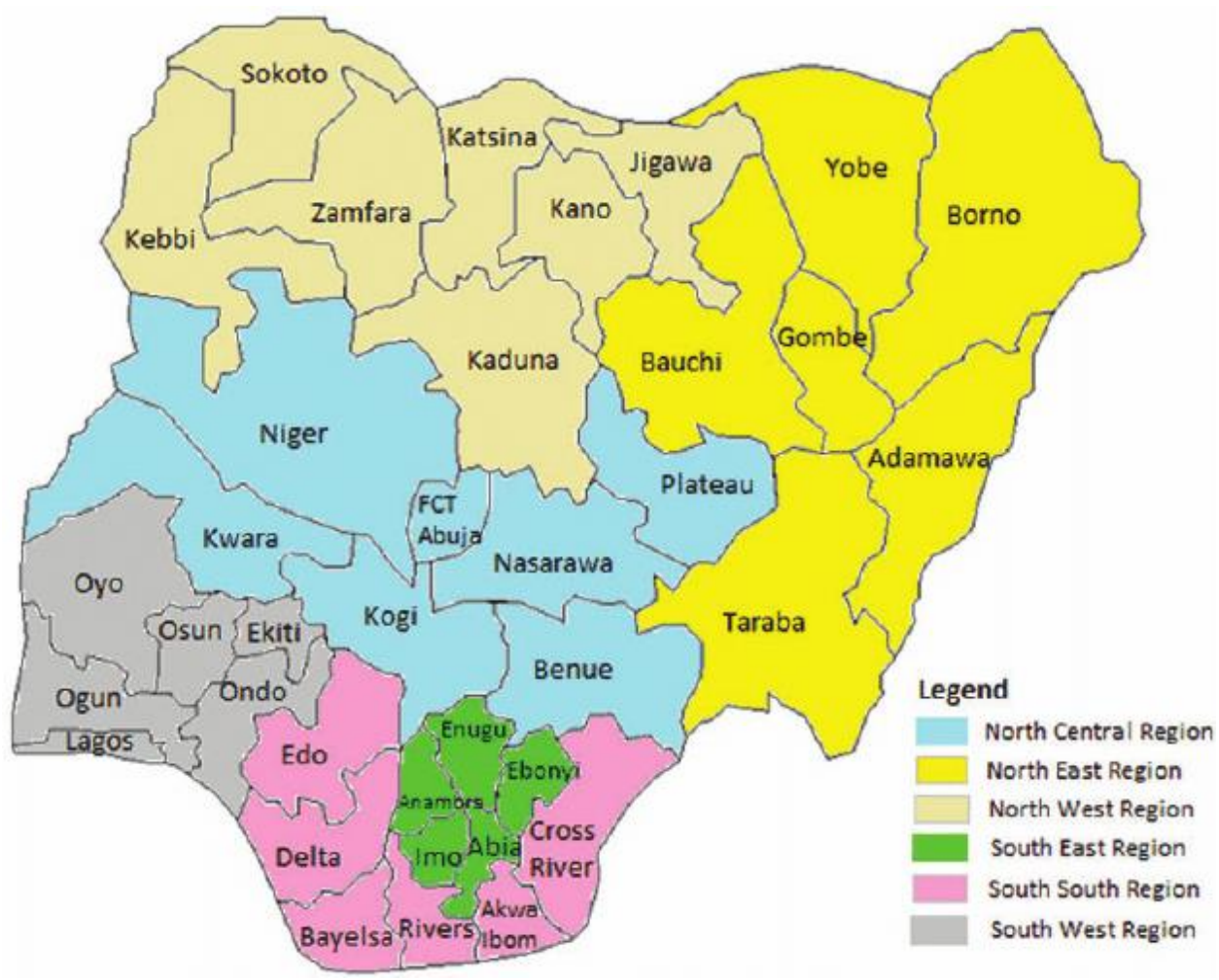
List of Figures

Chapter 1: Background of Study

1.1 Nigeria and its languages

Nigeria is the most densely populated country in Africa, with over 196 million people (Akinyemi 2014). It is a multilingual nation and home to over 250 ethnic groups speaking over 500 languages, reflecting the great cultural diversity in the country (Reed & Mberu 2014). It is made up of thirty-six states, with each state divided into local government areas. Figure 1 below is the map of Nigeria showing the location of the thirty-six states within the geographical zones and the Federal Capital Territory- Abuja (Gayawan, Arogundade, & Adebayo 2014). In each state, 5 or more languages are spoken. The exact number of languages in Nigeria is difficult to ascertain because Nigeria is known for its extreme linguistic diversity with multiplicity of languages (Omachonu 2015). It is however estimated in Blench (2012) that there are about 550 languages spoken in Nigeria. English and NPE are used as languages of wider communication and for interaction between people of different ethnic groups (Omachonu 2015). Nigeria has three dominant ethnic groups which are the Yoruba, Igbo and Hausa/Fulani. Other ethnic groups include the Efik, Ibibio, Anaang, Ijaw, Urhobo-Isoko, Edo, Itsekiri and others.

Figure 1- Map of Nigeria (Gayawan, Arogundade, & Adebayo 2014)



The English language, which was adopted from the British Colonial Government, is the official language of the country, while Nigerian Pidgin English is used as a *social language* with no official status attributed to it. *Social language* here means an informal language that Nigerians use when conversing with family members, friends and in informal situations in Nigeria, outside Nigeria and among Nigerians. Agheyisi (1988), explains that in the past, NPE served primarily as a trade language in markets and other informal commercial settings, or as a medium of interaction with uneducated employees and domestic servants in the past. But more recently,

NPE serves as a lingua franca in entertainment, for newscasting and for public enlightenment, even though it does not have any official status (p. 229).

A national policy on education adopted in Nigeria in 1977 addressed the national language question, and this policy was seen as "a bold step and a deliberate plan towards national multilingualism" (Afolayan and Bamgbose 1980, p. 220). In the policy, every child is encouraged to learn one of the three major languages (i.e. Yoruba, Igbo, and Hausa) in addition to their own mother tongue. The 1979 constitution of Nigeria, established on October 1st, 1979 during the administration of President Shehu Shagari, outlined the functional status of different languages in the country. English was established as the lingua franca, and Yoruba, Igbo and Hausa as the national languages. The national languages, Hausa, Yoruba and Igbo, are the three main recognized ethnic languages in Nigeria, allowed to be used in national functions such as the civil service, law, commerce, education and all other official domains (Ayeomoni 2012). Other minor ethnic languages are only officially recognized within their ethnic groups, like Ibibio and Efik, spoken in the South-South part of the country (see map of Nigeria in Figure 1, p. 2).

NPE is not mentioned at all in official language policy of Nigeria. However, while English functions as the official code and as a medium of instruction in school, NPE is used in informal settings for intra and inter-ethnic communication (Ferguson 1959). It is used as a means of communication between speakers who share different native Nigerian languages and among family and friends. English enjoys high prestige while NPE has low prestige (Akande 2010). The roles of these languages are further discussed below.

1.1.1 English

The British government first arrived in Lagos in 1851 and formally annexed Nigeria in 1865. Before the British government annexation in Lagos, English missionaries had already come to Nigeria for evangelistic purposes and had established English-medium schools, spreading both the gospel and western-style education. This made English prestigious, as the language spoby the educated. As early as 1882, English was officially established as language of instruction by the colonial government. The indigenous languages, Yoruba, Hausa and Igbo, were also taught in schools alongside English, but they were not used as the primary means of communication in the country. Nigeria officially became a British Protectorate and was colonized in 1901, and English became the language of administration (Ogunmodimu 2015) and was used in official domains. This colonization lasted until 1960. The 1979 constitution of the federal republic of Nigeria where sections provide functional status of languages in the country, specified English as the lingua franca of the country. English was established as the official language of the nation, used as language of education, media, religion (especially Christianity) and politics, governance and law (Ogunmodimu 2015). Its extensive use today as the official or primary medium of formal communication in government, international affairs, the judiciary, education, higher commerce and the mass media, along with its function as the language of communication above the local level, especially among the educated elite, has rendered it the most prestigious language in the country (Agheyisi 1984, pp. 237).

1.1.2 National/Major Languages

The national languages, Hausa, Yoruba and Igbo, are the major languages spoken in Nigeria. Yoruba belongs to the Volta-Niger branch of the Niger-Congo family of languages. Hausa,

though an African language, belongs to West Chadic branch of the Afroasiatic Language family. Igbo belongs to the Benue-Congo group of the Niger-Congo language family (Agheyisi 1984). These languages have the largest numbers of speakers, with over seventy million speakers of Hausa, 24 million speakers of Igbo and 21 million speakers of Yoruba (Adoti 2018). The restructuring of the country into three administrative regions; North East and West effectively gave prominence to the sociopolitical importance of the three dominant ethno-linguistic groups, namely; the Hausa- speaking people in the North, the Igbo-speaking people in the East and the Yorubas in the West (Agheyisi 1984). Arthur Richards was the Governor of Nigeria at the break of the second world war (1939 – 1945). Richards constitution established in his regime brought about regionalism to Nigeria where the country was divided into North, East and West. In the North, the Hausa group was the clear majority, constituting about 55% of the total regional population, with the next largest linguistic group in the region, Kanuri, being only about 7.5% (Agheyisi, 1984, p. 238). Accordingly, Hausa is spoken in the Northern region of Nigeria, which includes North-central, North-east and North-west zones. Yoruba is the dominant language spoken in the Western part of Nigeria, specifically the South-west zone. The Yoruba speaking group constituted the overwhelming majority in the west, making up over 80% of the total regional population, followed by Edo, with 7% in 1947 (Agheyisi 1984). Igbo is the dominant language in the Eastern part of the country, especially in the South-eastern region. The Igbo people were the dominant ethnic group in the eastern region, making 50% of the total regional population in 1947 (Agheyisi 1984). These geographical locations can be seen in the map of Nigeria in Figure 1 above (p. 2).

1.1.3 Minor Ethnic Languages

Apart from the national languages, other native languages are called *minor languages,* and are spoken by smaller ethnic groups in Nigeria. Many minor languages are also names of the ethnic groups, such as Ibibio, Anaang, Efik and others in the South, specifically the South-South zone. Others are Fulfulde, Kanuri, Bashar, spoken in the North, and Ese, Igasi, Arigidi among others, spoken in the West. They also include Eza, Legbo, Igala, and Oring, spoken in the East (Blench 2012). Some minor languages are spoken in more than one region of the country. An example is Kukele, spoken in Anambara state (Eastern Nigeria), and Cross Rivers state (Southern Nigeria) (See Blench 2012 for the list of languages and where they are spoken in Nigeria). Minor languages are sometimes taught as subjects in schools in the ethnic society they are spoken (Ogunmodimu 2015) and are also first languages of some of its indigenes in the area. They are the languages used in traditional functions, local parliament and mostly the primary language of communication in the area the languages are spoken.

Every State in Nigeria has a variety of language that is standard and widely spoken across local government areas in the state. It is always mutually intelligible within the state. For example, in Akwa Ibom state, there are 31 local government areas and 5 main languages spoken; Ibibio, Anaang, Ekid, Oro and Obolo. Ibibio has the largest number of speakers and is the language of the state capital, Uyo, spoken in 15 local government areas in the state and taught in primary/elementary schools in the whole state. Anaang is the second most dominant language in the state, spoken in 8 local government areas in the state. Other languages here are widely spoken in the state because their speakers can live anywhere in or outside the state. However, each local government has their own dominant/primary/indigenous language.

1.1.4 Nigerian Pidgin English (NPE)

Nigerian Pidgin English (NPE) is a neutral basilectal variety of the English language spoken across every ethnic and social boundary in the nation. In a creole continuum, basilect is a variety furthest from the standard lexifier language (Singler 1991), in this case English. Although English is the official language, NPE has almost taken over the role of lingua franca in informal domains (Ogunmodimu 2015). Despite NPE being an informal lingua Franca, which transcends regional, ethnic and linguistic boundaries, it has no official status or recognition in Nigeria (Ogunmodimu 2015). In the highly multilingual states in Nigeria, which also lack widespread indigenous lingua francas, such as Rivers and Cross River (in the South-south region), NPE readily complements English to meet this important communication need in Nigeria (Agheyisi 1984). More background on NPE is given in the following section (section 1.2).

NPE, popularly referred to as ‘broken English’ or ‘bad English’ by most Nigerians, is spoken by more than thirty million Nigerians (Holms 1989) and forms a continuum with the West African Pidgin English that stretches from Sierra Leone to Gabon in Central Africa (Barbag-Stoll 1983). The language originated from intercultural interactions between Europeans and Africans from the 16th century to the 19th century. In recent records, Nigeria is estimated to have between three and five million people who primarily use NPE in their day-to-day interactions, but is said to be a second language to up to seventy-five million people in Nigeria alone, about half the population (BBC 2016). NPE has come to dominate urban spaces in Nigeria, and has widespread acceptance to the level of it being the first language of many Nigerians, especially in Edo state, in Warri, Port Harcourt and Sapele (Elugbe and Omamor 1991).

Linguists over the years have proposed the adoption of NPE as the national language of Nigeria. One reason for this proposal is to use a Nigerian language as the official language in attempt to maintain an African identity (Agbali 2005, Ogunmodimu 2015). Choosing a single indigenous official language out of 500 possible languages is not an easy one to make, which may be why Nigeria still maintains English as its official language after independence (Ognmodimu 2015). Under such circumstances, NPE being a language that originated within Nigeria can be seen as indigenous to an extent, and may be promoted as a national language in the nation. Another advantage of NPE is that its lexicon embodies a composite of diverse Nigerian linguistic heritages like Hausa and Yoruba (Agbali 2005). It also cuts across religious affiliation, and even Nigerians in the diaspora use NPE as a language that reflects their Nigerianess, a marker of identity and solidarity (Akande & Salami 2010).

Chapter 2: The Variable - plural marking in NPE

Plural in NPE is marked in a number of ways. Faraclas (1989) argues that most nouns in NPE are assumed to be singular, except when indicated by morphosyntactic or pragmatic contextual cues, and bare nouns are given a generic reading. The (morpho-)syntactic means of signalling plural in NPE as identified in Tagliamonte et al. (1997) are the use of morphological plural *-s*, the postnominal plural *dem*, and prenominal determiners which include numerals and indefinite quantifiers. Double plural marking is further identified in the work of Ogunmodimu (2014) as another plural marking strategy, where more than one type of plural marking strategy is used in an NP. Reduplication of adjectives/nominals is another plural marking strategy in NPE. NPs can also be null marked (*zero* marking) in NPE, where the plural reading is derived from context based on prior information (Ogunmodimu 2014). The following are examples of the use of these plural marking strategies above from my data.

a. ***-s***:

The morphological plural affix *-s* has the same form of the *-s* plural marker in English which is suffixed to the noun in the NP. As seen in (1) below, *-s* is attached to the noun *Nigerian* to give it a plural reading.

(1) hia dey expensiv fo os **Nigerian-s** (06m2001)
Here is expensive for us **Nigerian-** PLU
'here is expensive for us **Nigerians**'

b. ***Dem***:

The *dem* postnominal plural marker is considered as the main plural marker in NPE in older studies such as Faraclas (1989, p.352). Mafeni (1971) claims that it is the only overt plural marker in NPE. This plural marker is common in other English lexified creoles, such as

Jamiekan and Gullah (Mufwene 1986), which will be discussed below. In (2), the *dem* plural marker which immediately follows the noun *fren* signifies or provides a plural reading to the noun in the sentence.

(2) yu no ol of mai **fren** **dem** (14f1970)
you know all of my **friend** **PLU**
'you know all of my **friends**'

c. ***redup***

In NPE, nominals or adjectives can be reduplicated to mark plurals. The adjectives usually precede the noun. In (3), the reduplication of the noun *ashawo* shows that the same word signifies more than one prostitute, providing a plural reading to the NP. In example (4) below, the adjective *fain* is reduplicated to indicate plurality of the noun *haus*. This shows that it is more than one fine house that will be built.

(3) **ashawo-ashawo** na im yu no (20f1985)
prostitute-prostitute is what you know
'**prostitutes** are the people you know'

(4) im go go biud **fain-fain** **haus** (20f1985)
him go go build **fine-fine** **house**
'he will go and build **fine houses**'

d. ***zero* marking**

Plural reading in this strategy of plural marking is derived from the context because there is an absence of overt plural marking and it relies on prior information to show the number of the noun in question. *Zero* marking (null marking) is also seen in older literature on NPE as one of

the ways plural is marked (Faraclas 1989). An example is seen below in (5) where the sentence, which is definite, does not have any overt plural marking on the noun *lab*, but the plural reading is derived from the context in the sentence.

(5) an mai skul get **ol** **di** **lab** (19f2000)
and my school get **all** **the** **lab**
'and my school has **all the labs'**

e. ***double marking***:

Double marking here refers to a system of marking plurals in NPE where two or more plural marking strategies are used to signify plurality for a noun in an NP. In the examples (6) and (7) below, there is both the use of reduplication of adjectives strategy of plural marking preceding the noun, and the morphological plural *-s* used to signify plural, for the nouns *gel* and *skul*. Either of the strategies, the morphological plural *-s* or the reduplication of adjective in the example (6) and (7) could be used to indicate plural in the examples.

(6) na dis **yong-yong** **gel-s** (14f1970)
it-is **this** **young-young** **gel**- PLU
'it is these **young girls**'

(7) **top-top** **skul-s** get (03m2000)
top-top **school**- PLU get
'**top schools** have-'

f. ***numerals and quantifiers***

Numerals are also used in NPE as a means of indicating plural. The example (8) below shows the use of a numeral in the NP *sevun yes* 'seven years' and the morphological plural suffix *-s* to mark plural.

(8) ai wok fo dem fo **sevun ye-s** bifo ai kom Canada
I work for them for **seven year-** PLU before I come Canada
'I worked for them for **seven years** before I came to Canada' (11m1974)

Quantifiers are used to indicate plural in NPE which is also obtainable in English, the lexifier language. Example (9) shows the use of a non-numerical determiner or quantifier and *zero* marking on the noun in question, such that the plural reading is derived from the word *meni* 'many' preceding the noun in the NP.

(9) so **meni choch** no bi laik hie (18f1969)
so **many church** no be like here
'so **many churches**, not like here'

The use of the morphological plural *-s*, the use of numerals, quantifiers and the postnominal plural *dem* to signify plural can be found in other Creoles with English as their lexifier language. Examples for Gullah are given in (10) below.

Gullah (adapted from Mufwene 1986, p.34)

(10) a. [hi sʌn dɛm/nɛm] 'his sons'

b. [hi sʌnz] 'his sons'

c. [*hi sʌnz dem/nem] 'his sons'

The example above in (10a and 10b) shows the use of *dem* and the morphological plural *-s* to signal plural in Gullah. In (10a), *dem* is used to mark plural on *sʌn* and in (10b) *-s* is used to mark plural. In (10c), where the NP *sʌn* is doubly marked with *-s* (z) and *dem*, the phrase is

ungrammatical. This would be grammatical in NPE, which is one difference between both languages. The example shows that both patterns (*-s* and *dem*) are used in the Gullah to mark plural.

In Jamaican Creole, *dem* and quantifiers are also used to signify plural. In (11), *dem* is used as a postnominal plural marker to signal plurality and in (12) the quantifier *som* is used to signify plural in Jamaican Creole.

(11) **Di BUK dem** de aal uova di tiebl ina im afis. (Jamaican Creole)
the book PLU be all over the table in him office
'**The books** were all over the table in his office'. (Mufwene 1986, p.34).

(12) **som** likl maaga **bwai** out-a duo. (Jamaican Creole)
some little meager **boy** outdoor
'**Some** very thin little **boys** are outside.' (Ghomeshi & Holness 2018 p. 1).

It is also worth noting that Jamaican Creole does not mark plural with *-s*, but with *dem*, numerals, quantifiers, and *zero* marking. Double marking is not used in Jamaican Creole either as seen below in (13) (Ghomeshi & Holness 2018).

(13) **som/chrii** likl bad-brok bwai (*dem)
some/three little ill-mannered boy 3PL
'**some/three** little misbehaving boys' (Ghomeshi & Holness 2018 p. 6).

As explained in Ghomeshi and Holness (2018, p. 6), in (13) above, the quantifier *som* and the numeral *chrii* are sufficient indicators of plurality, and it is ungrammatical to use *dem* with these elements.

2.1 Previous research

There have been a number of previous studies on plural marking in NPE dating back to Mafeni (1971), and while much of this work has been done in Nigeria (Mafeni 1971, Deuber 2005, Faraclas (1997), Ogunmodimu 2014), some was also conducted on Nigerian ex-pats living in Canada (Tagliamonte et al 1997). In this section I will first give an overview of the more descriptive research on plural marking in NPE, then focus on two specifically variationist studies.

Faraclas (1989) analyzes the grammar of NPE based on transcribed interviews of Nigerians living in Porth Harcourt between 1985 – 1986. He explained that in NPE, most nouns are assumed to be singular except when indicated by pragmatic or morphosyntactic cues. Numerals, quantifiers, the postnominal plural *dem* and null marking were reported as the plural markers in his study. He however stated that *dem* and null marking (*zero*) are the most common plurals in NPE (p. 352). He mentioned that *-s* can be used as a plural indicator but referred to it as 'borrowing'. Mafeni (1971) also identifies *dem* as the most common if not the only plural marker in NPE (p. 110). Deuber (2005) is a more recent study that investigated the grammar of NPE speakers in Lagos, a metropolitan city in Nigeria. The author shows that though Lagosians use *dem,* it is very limited. Deuber also argues that the use of postnominal *dem* as a plural marker has disappeared from the speech of the average educated NPE speaker, and is restricted to formal radio broadcast as a conscious pidginization strategy (p. 119).

Two other studies have provided variationist analyses of plural marking in NPE. I discuss them in more detail, as they are sociolinguistic analyses like my current study. In section 2.1.1 I first discuss Tagliamonte et al (1997), and in 2.1.2 I examine Ogunmodimu's (2014).

2.1.1 Tagliamonte et al. (1997)

Tagliamonte et al. (1997) is a variationist study of plural marking in NPE that looks at linguistic factors that may influence the choice of plural markers. The data collected for analysis was from 12 NPE speakers (11 adults, 8 male and 3 female, 1 child (age 11)) residing in Ontario, all born and raised in NPE-predominant areas in Nigeria, (Bendel, Rivers, Lagos) who had immigrated to Canada between 1991 – 1996. Their ages ranged from 28 – 52 years and they were middle class educated adults (except the child). Their variable context was all individual nouns with plural reference whether being accompanied with overt plural marker or not. Their data were analyzed using Goldvarb to determine which effects were statistically significant and to what degree. In their data, the post nominal *dem* accounted for less than 1% of the data. The morphological plural *-s* on the other hand was dominant in their data. It was identified as the most frequently used plural marker, which is sensitive to animacy. Animate nouns favoured overt *-s* plural marking in their data and generic reference favoured *zero* marking. 'Definiteness' was also not a distinguishing factor in their data and linguistic factors such as the preceding or following phonological segment were not significant factors in the choice of plural the speakers used.

Tagliamonte at al. (1997) argue that knowledge of other languages may play a role in the choice of plural marking. For instance, zero-marking is a plural marking strategy in Igbo. Tagliamonte et al (1997) found that speakers of Igbo were more likely to use zero-marking as a plural strategy, which they attributed to the influence of a dominant Igbo grammar. They further noted that the more exposed to English a speaker is, the more likely it is that they will use the morphological plural *-s,* measured by the level of education the speakers had acquired. No investigation of the use of the different plural markers in relation to the social factors age and

gender was done. They also did not look at the differences between their study and past literature concerning plural marking as a change that may be occurring in the language.

2.1.2 Ogunmodimu (2014)

Ogunmodimu (2014) is another sociolinguistic study that focuses on different plural marking features of Nigerian Pidgin English. In contrast with Tagliamonte et al (1997), Ogunmodimu (2014)'s data collection was carried out in Nigeria. The variants investigated were morphological plural *-s*, *zero* marking, numerals/quantifiers, *dem* and double-marking. The participants were native speakers of Hausa, Yoruba and Igbo, and minor languages Urhobo and Edo. The independent variables investigated social factors *ethnicity, education,* and *region of residence*, and a linguistic factor *animacy of antecedent*. Ogunmodimu (2014)'s results show that animate referents strongly favoured *-s* plural over inanimate referents. Speakers with higher education level strongly preferred the *-s* plural marker over others. The use of *dem* was highly disfavoured by those with higher levels of education. Speakers of Igbo, Urhobo and Edo, all have lexical plural markers in their native languages that function somewhat like *dem* and these speakers used *dem* more than speakers of Hausa, which does not have such a plural marker. Yoruba speakers, on the other hand, produced no *dem* even though they use third person plural pronoun to mark plural in Yoruba. For double marking, Speakers with university education used double marking more than those who only had high school education. The author noted that education is the major factor determining the use of *-s* suggesting it is as a result of contact with English. In this study there was an absence of significant differences of speaker's gender, L1 or region of residence, which, according to the author, suggests a broad consistency of NPE. That is, both factors (L1 and region of residence) do not play a role in the choice of plural used by the

participants of his study. Language change, the main interest of my current study, was not investigated in Ogunmodimu (2014). The results from both studies are summarized below in Table 1.

Table 1 - Summary of the results of Tagliamonte et al (1997) and Ogunmodimu (2014)

Tagliamonte et al. (1997)- results	Ogunmodimu (2014)- results
dem less than 1% of data	*dem* less than 1% of data
-*s* dominant marker	-*s* dominant marker
animate referents favour overt -*s* plural	animate referents favour overt -*s* plural
generic reference favoured *zero* marking.	generic reference not investigated
human referents received more overt marking of plural than generic referent nouns	only animate and inanimate referents were investigated.
education not investigated	higher education major factor for -*s*
suggest influence of native language in the choice of some plurals used.	found influence of native language in the choice of some plurals used.

2.2 Social variables (gender, age, dominant language)

In this section I give some background on previous research underlying the social variables that will be investigated in this study, and possible predictions based on previous studies. Gender will be discussed in 2.2.1, age in 2.2.2 and dominant language in 2.2.3.

2.2.1 Gender

The gender of a speaker has been found to be one of the most important social factors predicting sociolinguistic differences. Eckert (1989) defines sex as a biological category that serves as a fundamental basis for the differentiation of roles, norms, and expectations in all society. These roles, norms and expectations constitute gender, the social construction of sex (p. 246). Work investigating speaker gender goes back to foundational studies in the field such as Labov (1966) and Trudgill (1972), which have shown that gender is a predictor of linguistic differences. Based on past studies such as Wolfram (1969) and Labov (1966), Trudgill (1972) explains that women produce linguistic forms that closely approach that of the standard language or have higher prestige than those produced by men, (Trudgill, 1972, p.180) which could be the case in NPE. Trudgill's (1972) sociolinguistic study of British English has a striking feature in common with Labov's (1966) study of American English that investigated the same variable *-ing,* that is the variable production of *-ing* as either 'ing' or 'in' in English words like *singing*. Trudgill investigated this variable in Norwich English, to determine if the pattern correlated with the one observed in Labov (1966). His results showed that males used a higher percentage of non-standard [in] forms than females in British English, the same result obtained for American English. His results suggested that working-class non-standard speech is more highly valued and prestigious for the male speakers, which he calls *covert prestige*. This was reinforced not only by usage, but by the fact that male participants *under-reported* their use of the standard or prestige form while the women *over-reported* theirs. He therefore argued that women and men respond to different norms; men to covert vernacular prestige norms and women to overt, standard-language, prestige norms. The same result is obtained in Kristian (2018) study that investigated

the same variable -*ing*. Her result showed that gender was significant with male speakers favouring the non-standard [in] than their female counterparts.

Women, and especially urban young women, are often found to be leaders of language change in progress. An example is seen in Eckert's (1989) study of data on phonological variation among Detroit's suburban adolescents. The study showed a complex interaction between gender, social category, and urban-suburban orientation. The speakers in this area participated in northern cities chain shift, a pattern of vowel shifting that affects the fronting of low vowels and the backing and lowering of high vowels. Older changes in the shift were the fronting of (ae) and (a) and the lowering and fronting of (oh). The newer ones were the backing of (e) and (uh) (p.260). In her findings, social category differences (jocks and burnouts) showed significant differences only in the newer changes, while only gender showed significant differences in the older changes. That is, for gender, girls were leading in the oldest changes in the northern cities chain shifts. They led by far in the raising of (ae) and fronting of (a). Their results showed females mostly leading the males in sound changes.

Since Trudgill (1972) and other sociolinguistics studies (Wolfram 1969, Kristian 2018) have shown that women tend to use the prestigious forms more than the men, and Eckert (1989) has shown that women are often leaders of language change in progress, it is clear that gender is an important factor in sociolinguistic variation. Analysing gender effect in this study is important because it has not been well investigated in previous sociolinguistic studies of plural marking in NPE. By looking at gender, I intend to see whether women will use more of the variant (-*s*) that has the prestige of the superstrate- English. The morphological plural -*s* may be seen to have more prestige than the other plurals investigated in this study because it has the form of -*s* plural marker found in English. Since the results from older studies suggest that men preferred non-

standard speech (Trudgill 1972), I also intend to see if males will use more of the less prestigious/non-standard plural markers in NPE (postnominal *dem/zero* marking). I want to understand if there is a change from one form of plural marking to another and whether the women will be the leaders of the change as seen in previous sociolinguistics studies.

2.2.2 Age and Language Change

Age is another important factor in sociolinguistic studies that will be investigated in my research. Change occurs in language such that there could be a change from the use of one form or feature (X) in a language to another (Y). There is always a period in which both features (X and Y) co-exist, then Y becomes more preferred than X while X dies gradually. This is the concept of language change in progress (Walker 2010, p. 94). A gradually increasing or decreasing frequency in the use of linguistic features viewed according to speaker age can be interpreted as change in progress, which is the *apparent time hypothesis*, used to investigate change in progress (Tagliamonte 2011). Apparent time is the study of a language at one point in time by examining the distribution of variation by age groups like the older and younger generation of speakers. If for instance the younger age group uses a particular form of a feature of language (for example, the form *-s* of the plural marking in NPE) significantly more than the older age group, it could be interpreted as change in progress. Therefore, apparent time is a method used to investigate language change in progress (Chambers 2002).

The concept of apparent time is one of the foundational principles in Labov's early work and variationist sociolinguistics. Labov carried out sociolinguistics interviews with the residents of Martha's Vineyard in 1961 to study (ay) and (aw) diphthongs. In his analysis, he calculated an index value for the height of the vowel nucleus for each speaker for each diphthong. The results

showed that the nuclei of both diphthongs were progressively higher with each younger age cohort. The interpretation was that the older speakers have learned the language at the time where the speech community as a whole had lower values for height of the diphthongs. So, the older speakers' speech reflected the state of the language at that earlier date. Labov referred to this interpretation as 'apparent time' (Labov 1963). The regular increase across the four generations investigated represents a generational change in progress with younger speakers leading the change.

As discussed in section 2, older studies give *dem* and *null* marking as the primary plurals (Faraclas 1989) while newer studies show *-s* as the primary plural used in NPE (Tagliamonte 1997, Ogunmodimu 2014). The difference between Faraclas and Ogunmodimu's studies (both are conducted in Nigeria) suggests a change in the way plurals are marked in both time points (1985 and 2011- when both studies were conducted), with the former reporting *dem* and *zero* marking as the major plurals in NPE and the later reporting majority of *-s* in NPE. Tagliamonte et al's (1997) study also reported a majority of *-s* plural in their data, at a similar rate as Ogunmodimu's (2014) study (59% for both studies). One way to investigate this change is through an apparent time study, where the speech of different generations is examined. I may be able to infer from comparisons of two or three generations that any differences may be attributed to linguistic change in progress. According to Boberg's (2004) explanation of apparent time change, people do not significantly alter the way they speak over their adult lifetimes such that each generation of speakers reflects the state of the language which they acquired as a child. Rather, these differences reflect the passage of time, inferred through the comparison of different generations (p. 250 – 251).

Another example of language change being investigated in apparent time is the study of Tagliamonte and D'Arcy (2009). They set out to investigate the mechanism by which a linguistic change advances across successive generation of speakers. They looked at ongoing morphosyntactic and discourse-pragmatic changes. The discourse-pragmatic variables they looked at were *like, be like, so, have to, have, going to*. For some of the variables, example *be like*, the tests they conducted revealed the highest possible level of significance, demonstrating a strong and significant negative correlation between the use of *be like* and age (p. 92). This is also the case for the other variables all led by adolescents and women except the modal *have to*. Their results showed that a considerable amount of the variation can be explained by age, and that changes that are vigorous are most likely to percolate through the youngest members of a population. They stated that these changes mark transitions from preadolescence, to adolescence to young adulthood, and that last stage is stabilization of the grammar. Generally, the changes progress with a peak during adolescence as seen in the use of these variables investigated. This is therefore a motivation to look at different generations in my study. If the younger speakers in my study use *-s* more and less or no *dem*, and vice-versa the case for the older speakers, then it could be interpreted as change in apparent time.

Age can tell us different things in sociolinguistic analysis. Since there are older studies that show that *dem* and null marking (*zero* marking) are the dominant plural markers (Faraclas 1989 and Mafeni 1971) and newer ones that show that *-s* is dominant (Tagliamonte et al. 1997 and Ogunmodimu 2014), I want to look at to see whether or not these differences reflect a change in progress, and what factors play a role in this change.

2.2.3 Dominant Language

Since Nigerians are mostly multilinguals, the languages they speak could have an impact on their use of NPE. If the dominant language of an NPE speaker is Yoruba, for instance, the speaker may tend to use features in NPE that are similar to that of Yoruba when speaking NPE. This makes the variable dominant language an important one when investigating variation in NPE. We saw that previous researchers include some of these languages as a variables in their studies (Ogunmodimu 2014, Tagliamonte 1997).

There are many studies showing that one language can have an effect on another within the speech of a bilingual or multilingual speaker. For example, Kootra and Doedens (2016) conducted a bilingual study which focused on cross-language interactions from different sources of experience in the production of dative sentences by Dutch-dominant and Dutch–English bilinguals. They show that representations from the dominant/more proficient language are easier to activate and more difficult to deactivate than representations from the non-dominant/less proficient language. This results in a relatively strong influence of the dominant language on processing in the nondominant language compared to the other way around. They predict that all cross-language effects could be influenced by language dominance in the sense that cross-language effects are generally more likely to occur from the dominant to the non-dominant language than vice versa.

In their overall findings, the influence of the dominant language (Dutch) on the non-dominant language (English) was stronger than the other way around (p. 725). Their study shows that the factor of a dominant language could play a role in the grammar of bilinguals for the languages they speak. Since the participants of this study are multilinguals, I intend to look at

dominant language as an independent variable in this study to see if the speakers will use plural variants in NPE that resembles the ones that are used in their dominant language and vice-versa.

Also, in my study, the majority of the participants are Yoruba speakers, which is a different West African language from Igbo, the native language of majority of the participants in Tagliamonte et al.'s (1997) study. Since the authors suggested that substratum influence from Igbo may have been the reason for the high rate of *zero* marking, it will be interesting to see if it is the case among Yoruba speakers and participants in my study in general. In Yoruba, there is a plural marking strategy that is similar to postnominal plural *dem* in NPE. For participants whose dominant language is English, it would be expected that they would use more of the plural marker *-s*. For NPE dominant language speakers, *dem* may be the plural they may use more since it is a creole/pidgin plural marker.

2.3 Linguistic variables

Animacy, *type of nominal reference*, and *determiner type* are the three linguistic variables investigated in this study, which will be further discussed in section 3.2. The primary reason for these being investigated is that they were used as linguistic variables in Tagliamonte et al (1997), where both *determiner type* and *animacy* were found to be significant. The present study will attempt to replicate Tagliamonte et al (1997)'s study. In their study, animate nouns favoured overt *-s* plural marking in their data and nouns with generic reference favoured *zero* marking. Determiner type was also found to be significant in their data. Possessives, definite articles and bare nouns (no determiners) favour *zero* marking while nouns with demonstratives, numeric and non-numeric determiners favour *-s.* Their result countered the received wisdom about creoles that a mark should be favoured in contexts where plurality is not otherwise disambiguated in the

NP headed by the noun in question (Todd 1974, Tagliamonte et al 1997). It was expected that nouns with possessive, definite articles and bare nouns would be marked with *-s,* and nouns with demonstratives, numeric and non-numeric determiners would favour null marks. This was not the case. I intend to find out if the same pattern will occur in my research or as is expected in creoles. My study is conducted twenty years after Tagliamonte's work, and my participants are of a similar demographic, that is, they are all Nigerians living in Canada. This study may help show whether there is a change in the way NPE speakers today use plural markers in NPE than it was used twenty years ago.

2.4 Research questions

One of the variants, plural marker (*dem*) is said to be extremely rare, accountable for less than 1% of the data in Tagliamonte et al (1997). This is surprising since *dem* was one of the most frequently used plural signals in NPE nouns in older studies such as Faraclas (1989) and Mafeni (1971). Also, as a native speaker who uses *dem* as a plural marker, I am particularly curious about its disappearance. I will be investigating the variation between *dem, zero* marking, *-s*, and *reduplication* of nouns/adjectives as the plural markers in NPE. This may help answer the following questions:

- Is one variant the older variant and the other new, i.e. is there a change in progress from the use of one form over the other?
- Are other social factors such as age, gender or dominant language playing a role in this variation? If the variation is in fact change in progress, who are the leaders of this change?

- Do linguistic factors such as animacy, nominal reference and determiner type affect the choice of the plural marker used in NPE?

These factors have been discussed in section (2.2) and (2.3) above. I now move on to section (3) where I outline the methods used to collect and analyze the data to answer the above research questions.

Chapter 3: Methodology

In section 3.1. I discuss the data collection, in 3.2 I describe how I analyze the data, and in 3.3 I discuss the statistical analysis of the data.

3.1 Data Collection

The data used for this study was collected from 20 NPE speakers who were living in Winnipeg, Manitoba at the time of the interviews in the fall of 2019. The participants were recruited through the snowballing method, such that friends and family of the researcher informed their own friends that fit the requirements of participants for the study, to participate in the study if they are interested. Some interviews, especially those of the younger speakers, were mostly University of Manitoba undergraduate students, were conducted in the sociolinguistics lab of the University of Manitoba. The older speakers were interviewed in their own homes or in quiet places of their choosing, like libraries and churches in Winnipeg. In the sociolinguistic interviews, I talked to the participants between 45 minutes to 1 hour, asking questions that would rouse a story. The questions asked in the interview focused on informal topics such as school activities, hobbies, sports, TV shows, friends, family, and as suggested in Tagliamonte (2011 p.104), discussions about problems with their parents (like who is more strict), boyfriends and girlfriends, etc. (p. 104). The participants were not obligated to answer any question they were not comfortable answering, even though such situations did not occur. The recording device used for the interviews was the Zoom H4N Handy recorder. Sanken COS-11D Miniature Omnidirectional Lavalier Microphones were used as external microphones. These were attached to the participants' clothing during the recording to help capture a high quality and volume of the

participant's voice. The recorder accepts up to 32GB SD card, which was inserted into the recorder before every interview to store the recorded interviews.

3.1.1 Subjects

Twenty participants took part in the study. Two age categories were targeted: over 50 years old (born between 1963 - 1970), and between 18-35 years old (born between 1985- 2001). Due to difficulties in recruiting older speakers, however, because of full-time jobs and other commitments, one 46-year-old male and one 49-year-old female were interviewed as part of the older cohort. Ten younger speakers (5 males and 5 females) of the ages 18 – 35 took part in the study. Nine were of ages 18-24 and one female speaker was 34 years as of when the interviews were conducted. The distribution of speakers age and gender is seen below in table 2 below (p. 28). The older speakers are all highly educated in Nigerian universities in fields such as accounting, education, healthcare etc. They have all lived in Canada for about 5-10 years. The younger speakers were mostly first year university undergraduates who came to Canada to acquire post-secondary education, a graduate student and a 34-year-old businesswoman. The level of education of the participants is therefore controlled for, since they all have or are acquiring post-secondary education. The younger speakers have all lived in Canada for 1-5 years. All the speakers (except the 1 speaker that was born in the UK) were born and raised in Nigeria, in areas where NPE is spoken, such as in Lagos, Edo, Port Harcourt etc. They had all live in Nigeria most of their lives, long enough to acquire and communicate fluently in NPE.

Table 2 - Distribution of speakers by age and gender

Speakers	Male	Female
Older	5	5
Younger	5	5

All the speakers are multilinguals with fluency in English, one major or minor language, and NPE. The major languages speakers spoke were Hausa, Yoruba and Igbo, and the minor language some spoke was Ẹ̀dó/Bini. However, Yoruba is spoken by majority of the participants in the study. The dominant languages of the speakers which were self-reported were Yoruba (10), NPE (5), English (4) and Hausa (1). The lack of even distribution reflects the fact that dominant language was not originally a factor of interest for this study. The distribution of speakers by dominant language is seen in Table 3 below.

Table 3 - Distribution of speakers by dominant language

Dominant language	Male		Female	
	Older	younger	older	younger
English	-	1	1	2
Yoruba	5	1	3	1
NPE	-	2	1	2
Hausa	-	1	-	-

3.2 Analysis

Each interview recording was coded in Elan transcribing software (Nagy & Meyerhoff 2015). The transcriptions were focused on sentences where plural NPs were used. In the sections that follow, coding (3.2.1) and exceptional distributions (3.2.2) will be discussed.

3.2.1 Coding

Elan is the software used to transcribe and code the data for this study (Sloetjes, & Wittenburg 2008). Elan is primarily a transcribing tool, which may also be used for extracting and coding tokens of linguistic variables for quantitative analysis (Nagy & Meyerhoff 2015, p. 5). After recording the interviews of my study and importing it into Elan, I created tiers in which to transcribe the interview and code each variable, and then listened for all instances of plural readings. Whenever there was one, I transcribed the sentence and coded for each variable, adding the appropriate level in each tier. With Elan, all the variables investigated in each speaker's interview are coded for in the file and could be useful for future research. See Nagy and Meyerhoff (2015) for a detailed description of how Elan can be used for coding. An example can be seen in figure 2 below.

The tiers were organized as follows:

- Speaker (labeled using a speaker code e.g. 01f2000, 'f' indicating gender 'female' and 2000 the year of birth of the participant)
- Interviewer
- PLURAL (-s, dem, zero, redup)
- Animacy (hum, ani, inani): human, animate and inanimate
- Noun

- Type of nominal reference (def, indef, gen): Definite, indefinite and generic noun
- Type of determiner (poss, num, non-num, def, no, dem): Possessive, numeric, non-numeric, definite, no determiner and demonstrative determiner.
- Double or single (doub, sing)
- Second plural marker – this tier was only populated when a noun had two plural markers used in a noun phrase or sentence to signal plurality (double marking).

Figure 2 - Example of ELAN transcription and coding

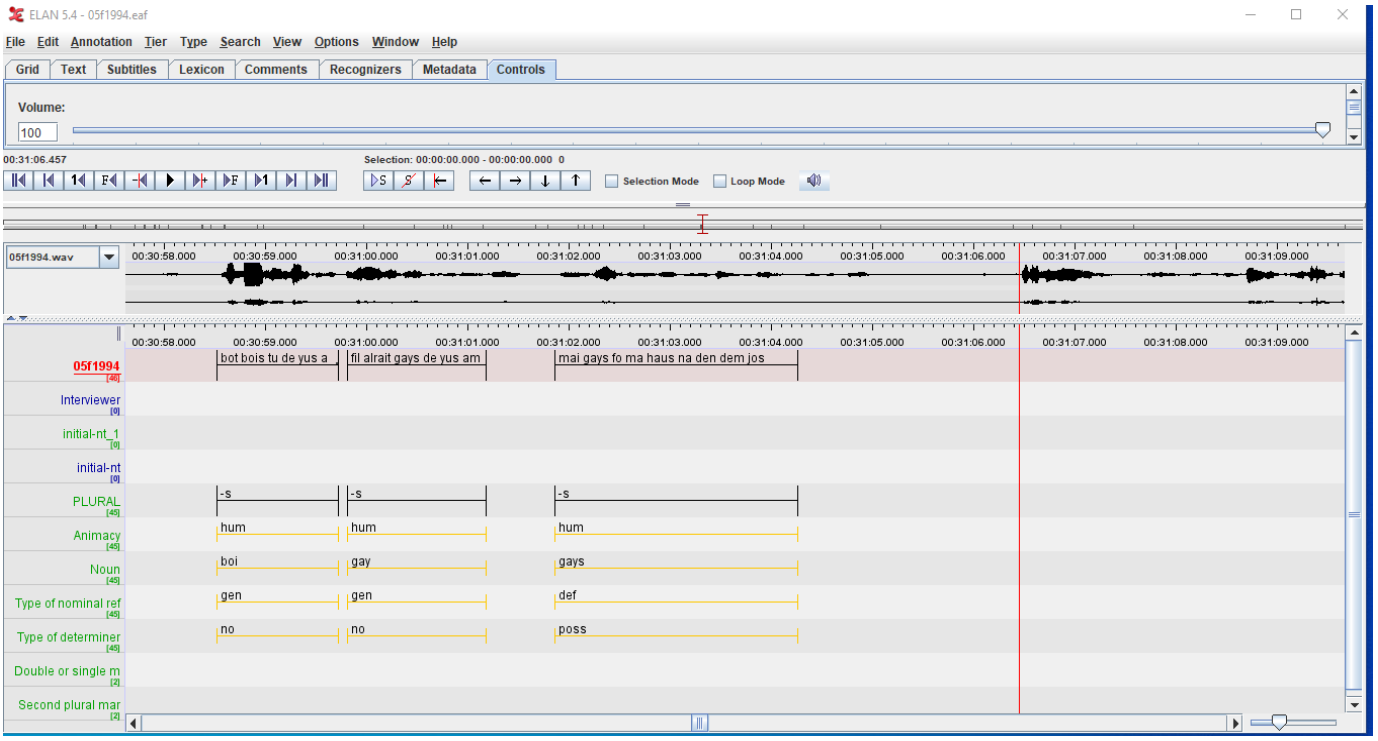


Figure 2 above shows the organization of tiers used to code the data for this study.

After coding the variables, I exported transcription annotations, token codes and timestamps (which were later removed) to create a tab-delimited text file to use as input into

Excel and into the statistical analysis program, Rstudio. Examples of the data coded for the linguistic variables (animacy, type of nominal reference, type of determiner) are provided next.

3.2.1.1 Animacy

In this section, I look at examples of the linguistic variable *animacy*. Nouns were coded for *human* (hum), *animate* (ani) and *inanimate* (inan). To see if there were differences in the choice of plural between human and non-human nouns animate nouns, human nouns were coded as *hum* while non-human nouns were coded as *ani*. In (14) below, the noun *kosins* is human, in (15) the noun *flais* is animate and in (16) the noun *festivals* is inanimate. The three nouns are marked with the morphological plural *-s*.

(14) mai papa **kosin-s** de around os (hum - 01f2001)
my father **cousin-** PLU is around us
'my father's **cousins** are around us'

(15) bicos dem tok se **flais** de folo mit (ani - 07m2000)
because they talk say **flies** use-to follow meet
'because they say **flies** usually meet also'

(16) e get som **festival-s** wey de hapun (inan - 03m2000)
there get some **festival-** PLU that is happen
'there are some **festivals** that are happening'

3.2.1.2 Type of Nominal Reference

In this section I give examples of data according to the reference of the noun, that is, definite, indefinite and generic NPs. Definite NPs are specific particular individualized NPs where

reference is assumed to be clear to the hearer, while for indefinite NP, the speaker may be aware of what is being referred to while the hearer may not (Lyons 1999, p.2-3). A generic noun phrase is a noun phrase that does not refer to a specific (set of) individual(s) but rather to a kind or class of individuals (Reiter & Frank 2010).

(17) **awa joj** no go spik (def - 09m1968)
our judge no go speak
'**our judges** will not speak'

(18) den dia papa mari **tu waif-s** (indef- 02f2001)
then their father marry **two wife-** PLU
'then their father married **two wives'**

(19) yu sabi di we **Nigerian -s** de du am (gen - 03m2000)
you know the way **Nigerian-** PLU are do it
'you know the way **Nigerians** do it'

In the example (17) above, the reference of the noun *joj* is definite because of the possessive determiner *awa*, since possessive NPs are interpreted as definite (Lyons 1999). In (18) the hearer does not have knowledge of which *tu waifs* are being referred, therefore it is indefinite. The noun *Nigerians* in (19) is generic, referring to all Nigerians.

3.2.1.3 Type of Determiner

This section provides data showing the different types of determiner of the noun. It includes possessive, no determiner, demonstrative, definite, non-numeric and numeric determiners. Demonstratives in NPE show number distinction and they include; *dis* – 'this/these' *dat* – 'that' and *dos* – 'those'. They are loan words from English (Mowarin 2013). For *dis*, the number

distinction can be determined from context for *zero* marking, or by any overt plural marking used in the NP.

The noun *joj* in example (20) has the possessive determiner *awa* and the plural reading of the noun is determined from context (*zero* marking). For example (21), the noun *kwestions* does not have any determiner. *dos barias* in (22) has the plural demonstrative determiner preceding the noun *barias*. *Plenti* is the non-numeric determiner used in (23) as the determiner preceding *gehs*. In (24), the number *tu* is used as a numeric determiner preceding *boi*. The morphological plural *-s* marks plural in examples (20-24). In example (25) above, the plural reading is derived from context (*zero* marking) the noun has a definite determiner *di* that precedes the noun *indigin*.

(20) **awa joj** no go spik (poss - 09m1968)
our judge no go speak
'**our judges** will not speak'

(21) if mi giv yu **kwetion-s** (no - 16f1965)
if me give you **question-** PLU
'if I give you **questions**'

(22) God don brek ol **dos barias** (dem - 18f1969)
God has break all **those barrier-** PLU
'God has broken all **those barriers**'

(23) im get **plenti geh-s** (non-num - 19f2000)
he get **plenty girl-** PLU
'he has **many girls**'

(24) nak **tu boi-s** (num - 20f1985)
hit two **boy-** PLU
'give birth to **two boys**'

(25) an **di indigin** dia (def - 09m1968)
and the **indigene** there
'and **the indigenes** there'

3.2.2 Inclusion/Exclusion Criteria

A total of 811 tokens of plural nouns were retained for quantitative analysis. Four main types of examples were not included in the analyzed data. They are; a) situations where plural is ambiguous, b) where there is ambiguity over whether the plural is English or NPE, c) unintelligible recordings and d) phonological ambiguity.

3.2.2.1 Ambiguous plural

Expressions with *zero* marking that are not clear from context whether they are singular, or plural were excluded, as in (26).

(26)	wi	no	get	**hostel**	wey	di	skul	biud	
	we	no	get	hostel	that	the	school	build	
	‘we don’t have **a hostel/hostels** built by the school’								(14f1970)

In (26), the word *hostel* does not have an overt plural marker and from the context, it could be singular or plural. Occurrences like this were not counted.

3.2.2.2 English or NPE

Examples of data that were not counted because it was uncertain whether the plural was English or NPE are seen below in (27-28);

(27)	afta	choch	**bois**	**briged**	(12m1963)
	after	church	**boys**	**brigade**	
	‘after church we attend **boys brigade’**				

(28) Bambam bi **teti ye-s** **old** (02f2001)
Bambam is **thirty year-** PLU old
'Bambam is **thirty years old'**

In example (27) and (28), the nominal expressions *bois briged* and *teti yes old* are the same as English expressions. Example (28) was not counted as plural marking in NPE since it could be that the speaker code-switched and used an English expression in these contexts. Ordinarily 'boys brigade' is a name of a voluntary organization. There is no NPE expression for the name of this organization other than the English one, and so expressions such as these were not counted as *-s* in NPE in the data. Similarly, 'thirty years old' is a common way to tell someone's age in English. In NPE, the last word old is usually left out, to have the expression *teti yes*. This is why the NP *yes* in *teti yes old* was not counted as morphological plural *-s* in the my data. Tagliamonte et al describe these as frozen expressions that show no variability in marker usage, remaining categorically bare or categorically marked (1997:108).

3.2.2.3 Phonological Ambiguity

In this section, examples are provided for data that were not counted due to phonological ambiguity as seen below in (29-30).

(29) somtaims **klot-(s)** **somtaims** mit (02f2001)
sometimes **cloth-**(PLU) sometimes meat
'sometimes **cloth(es) sometimes** meat'

In example (29) above, the noun *klot* is immediately followed by the adverb *somtaims*, that begins with a sibilant phoneme /s/. Because of the neutralization context, it is not certain whether

the noun is plural *klots* or singular *klot* and the *-s* being a result of the following /s/ sound from the word *somtaims*. Therefore, this token and others like it was not included.

3.2.2.4 Unintelligible Recording

The example (30) shows an instance where the recording was unintelligible.

(30) ron ha **strit-(s)** (01f2001)
run her **street-(**PLU**)**
'do something bad to her'

In (30) it was difficult to hear from the recording if the noun was *strit* or *strits*, and so the example was not included for analysis.

3.2.2.5 Other coding considerations

In NPE and some other creoles like Jamiekan, *dem* can be used to produce an associative meaning. The use of *dem* as an associative plural refers to a ranked group of people with the focal member identified, and the associates (usually family or close friends) implied (Ghomeshi and Holness 2018). An example is seen in (31) below;

(31) **Jon dem** tu de fain trouble
John -ass- too is find trouble
'**John (and friends/associates)** are troublesome'

In (31) it is John and either his family members or friends that are troublesome, as opposed to more than one John. Examples of such, however, did not occur in my data.

For consistency, I counted the first plural marker in the examples with *double marking*. Although they did not end up making up much of the data (<4%), this was done to enable the double marking to be looked at separately if need be.

Mass nouns were also not included in the data as provided in example (32) below where *sofa* 'suffer' is a non-count noun reduplicated, but not coded as plural in my data.

(32)	**Sofa-sofa**	tu	moch	fo	Lagos	(03m2000)
	Suffer-suffer	too	much	for	Lagos	
	'there are excessive **sufferings** in Lagos'					

3.3 Statistical Analysis

R is the statistical programming environment used for determining statistical significance of the independent variables in the use of plurals as summarized above. After coding in Elan software, the transcribed files were opened as Excel spreadsheets and were categorized based on the independent and dependent variables. These Excel spreadsheets were then converted back to a tab-delimited text format and inputted into RStudio for summary statistics and to determine which variables are statistically significant and to what degree. This is achieved by running statistical models such as the generalized linear mixed model, or glmer. Within the model, I am using random and fixed effects to determine the choice of plural marker used by the speakers from all the variables investigated. *speaker* and *noun* as random effects was fit to the dataset in the R model (McCulloch & Neuhaus 2014). Fixed effects in the model were a two-way interaction between *age category* and *gender*, all social factors (*age*, *gender* and *dominant language*) and the linguistic factors (*animacy*, *type of nominal reference* and *type of determiner*). R is a programing language and software environment for statistical computing and graphics, while RStudio is an integrated development environment (IDE) for R which is a good analytical software for quantitative data such as the one used in this study.

Chapter 4: Findings

In this section I look at distributional analysis of my data. Overall distribution is given in 4.1 and the distribution of plurals by variable is given in 4.2.

4.1 Overall Distribution

Table 4 shows that *-s* is the dominant plural marker used in the data 80% of the time over all other plural markers. *Zero* marking is used 17% of the time, reduplication 1.5% of the time, while the postnominal plural *dem* is used about 1% of the time. Recall that the *dem* plural marker was also found in Tagliamonte et al (1997) to be less than 1% of their entire dataset, with *-s* and *zero* marking as the dominant plural markers (59% and 39%) respectively.

Table 4 - The overall distribution of variants

Overall distribution	%	N
-s	80.6	655
dem	0.9	7
zero	17	137
redup	1.5	12
Total N		811

4.2 Distribution by Variable

As outlined in section 3, the variables used in this study are divided into linguistic variables and social variables. The social variables are *age*, *gender* and *dominant language*. The linguistic

variables are *animacy*, *type of nominal reference* and *type of determiner*. In this section I will examine the distribution of plural marking according to each of these variables.

4.2.1 Social variables

Age

Although -s is overall the most frequently-used variant, the rates of usage of each variant between different ages differs As seen in Figure 3, the younger speakers use the morphological plural *-s* 90% of the time, while the older speakers use it 60% of the time. For *reduplication*, the younger speakers use it about 2% and the older speakers use it less than 1% of the total tokens counted. *zero* marking is more common among the older speakers (35%) than among the younger speakers (7%). The distribution shows that *-s* is rising in use among the younger speakers and it seems to be replacing *zero* and *dem* as plural markers. While *dem* is not used much overall, it is especially worth noting that it is absent in younger speakers' speech. Table 5 shows the percentages and tokens for age.

Figure 3 – Age

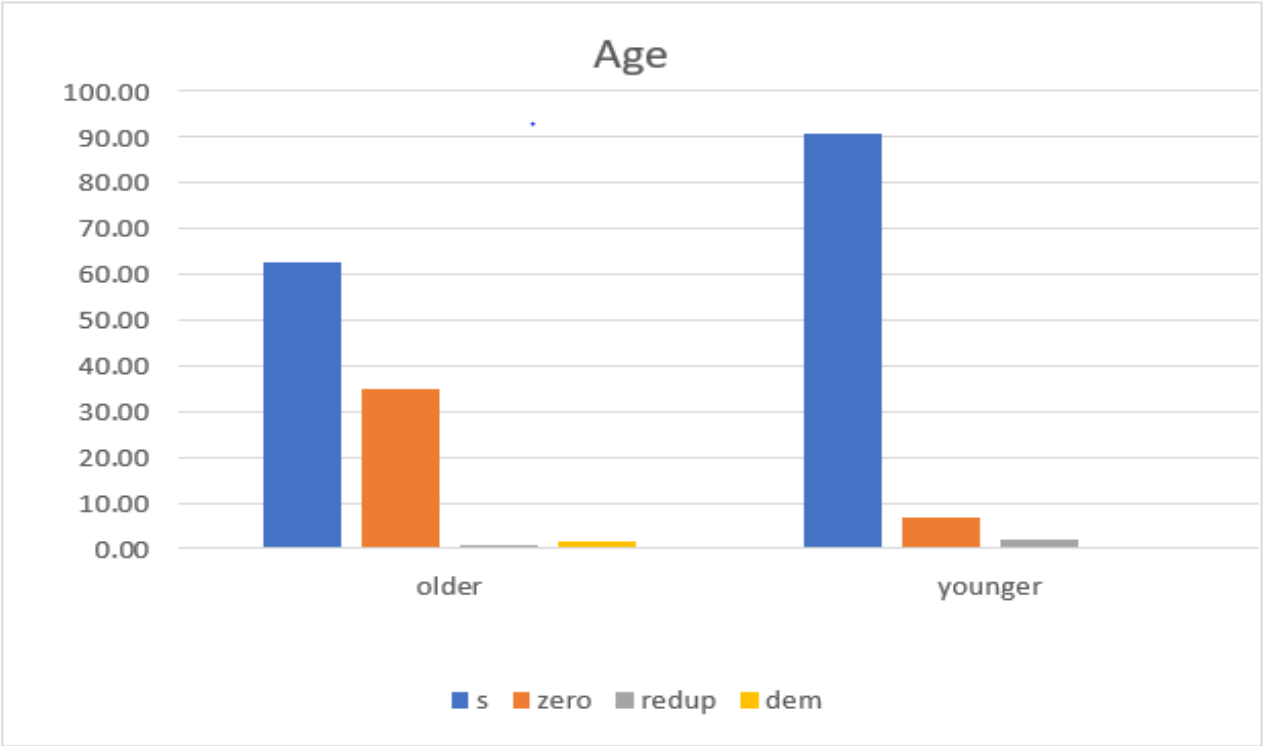


Table 5 - Distribution of plural by age of the speakers

age	total no. of tokens	-s % (n)	zero % (n)	redup % (n)	dem % (n)
older	288	62 (180)	35 (101)	0.69 (2)	2 (5)
younger	523	90 (475)	7 (36)	2 (10)	0.38 (2)
total	811				

Recall that one speaker in the younger group is somewhat of an outlier within that group, with a birth year of 1985 while the others had birthyears of 1994-2001. Because of this

difference, the individual distribution of this speaker in comparison with the other 'younger' counterparts' is given in Table 6. This speaker produced 39 tokens, dominated by the morphological plural *-s*. There was no use of the postnominal plural *dem*. This speaker seems to pattern at a rate in between that of the older and the younger speakers, at least for -s and *zero* marking, as seen in table 6. This could be because the speaker is somewhat older, a business owner, and at a different point of her life than the others in her group, who are all university students. I will analyse the younger speaker's data with and without her data to see if it will effect a change in the statistical outcome.

Table 6 - Distribution of plural variants for speaker (20f1985)

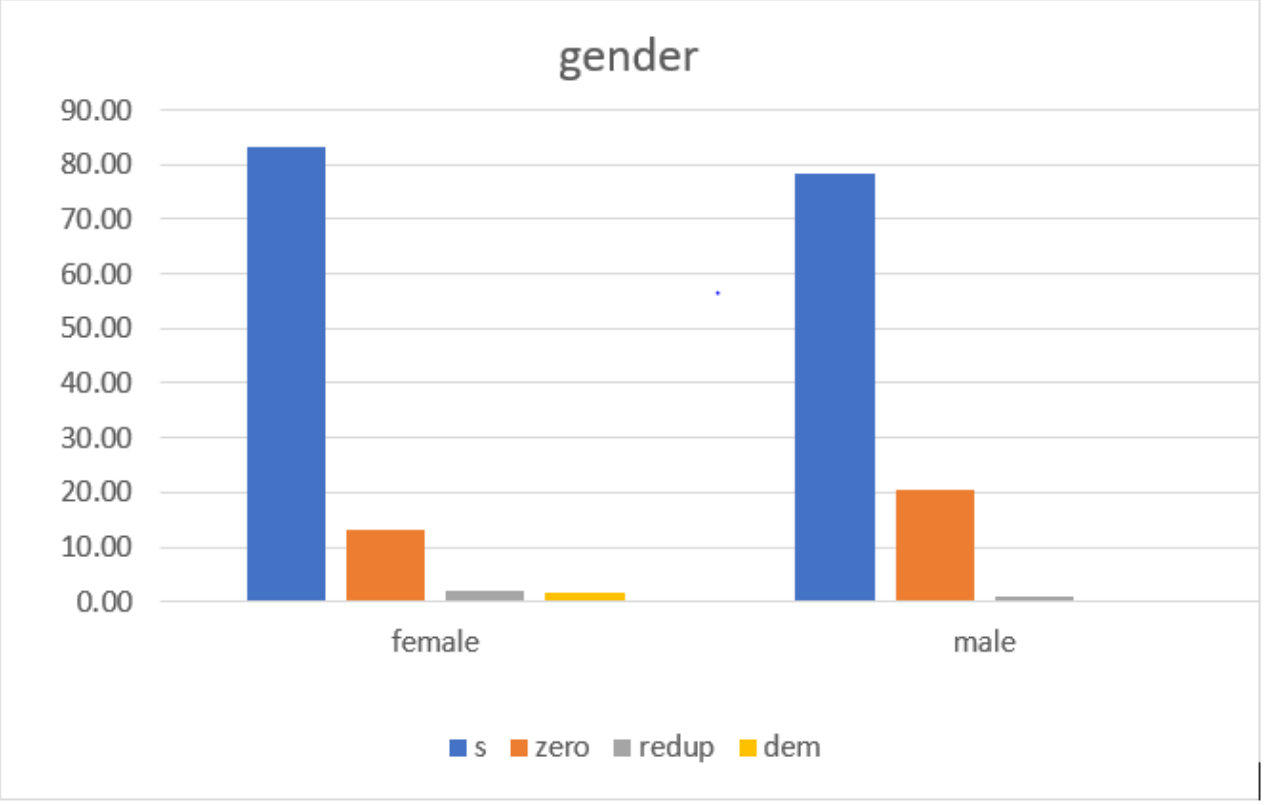
plural	No. of tokens counted	Percentage (%)	Other younger speakers %	Older speakers %
-s	26	71.8	91	62
zero marking	7	17.9	6	35
reduplication	4	10.2	1.6	0.69
dem	0	0	0.4	1.74
Total no. tokens produced =	39			

Gender

An equal number of male and female speakers were interviewed to obtain a sample balanced for gender. Figure 4 below breaks down the distribution of the plural marking pattern across male and female speakers. The female speakers used somewhat more *-s* (83%) than the male speakers

(79%). The male speakers used *zero* marking (20%) more than the female speakers (13%). The data suggests that there is slightly less *-s* among men and they make up for it with the *zero marking*.

Figure 4 - Gender



The distribution of plural tokens for male and female speakers are shown in table 7 below.

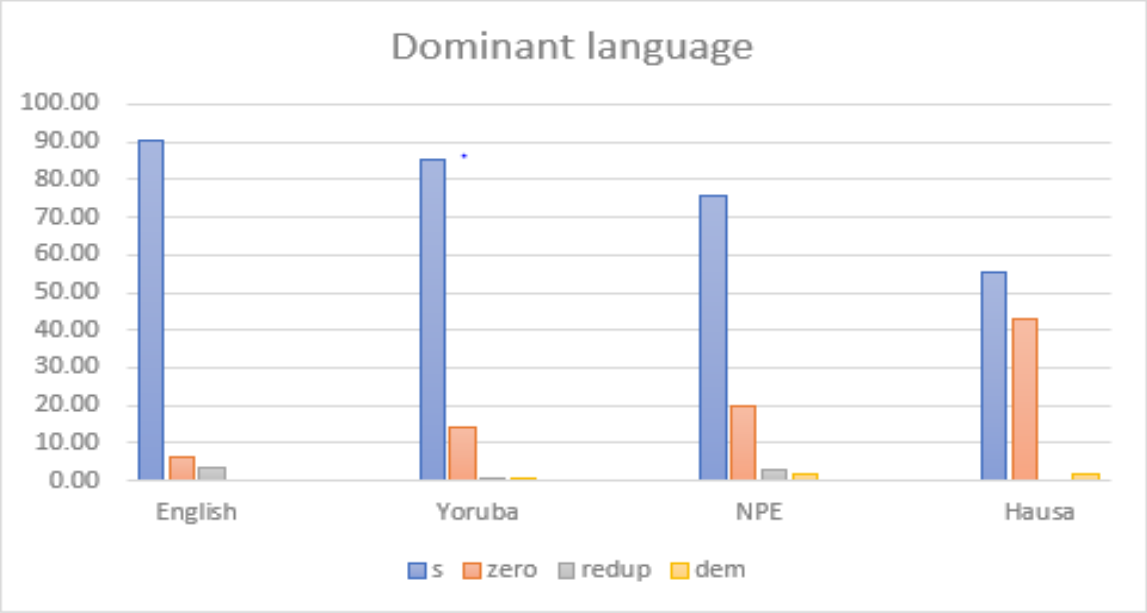
Table 7 - Distribution of plural by gender

gender	total no. tokens	-s % (n)	zero % (n)	redup (n)	dem (n)
female	356	83 (296)	13 (47)	2 (7)	1.69 (6)
male	455	79 (359)	20 (90)	1 (5)	0.22 (1)
Total	811				

Dominant language:

The dominant language of the speakers were Yoruba (10), NPE (5), English (4) and Hausa (1). Given that the morphological plural *-s* is the dominant plural used in the data, it is expected that it would be the highest percentage for each variant. Participants that have English as their dominant language as seen in Figure 5 below, use more *-s* (91%) than *zero* marking (6%) and reduplication (3%). They did not use any post nominal plural *dem*. The Yoruba speakers used *-s* 85% of the time while *zero* marking was used approximately 14%. Both reduplication and *dem* were used less than 1% in their data. For the NPE speakers *-s* is the dominant plural used 76%, *zero* marking 20%, reduplication of adjectives/nouns (2.5%) and *dem* is used 1.5% of the total plurals used. The Hausa speaker used the morphological plural *-s* 55%, *zero* marking 43% and *dem* less than 2% in his data and this is a marked difference.

Figure 5 - Dominant language



The distribution of plural tokens by dominant language is shown below in table 8

Table 8 – Distribution of plurals by dominant language of the speakers

Dominant language	-s % (n)	zero % (n)	redup % (n)	dem % (n)	Total no. of tokens
English	91 (130)	6 (9)	3 (4)	0 (0)	143
Yoruba	85 (281)	14 (46)	0.30 (1)	0.61 (2)	330
NPE	76 (208)	20 (54)	2.5 (7)	1.5 (4)	273
Hausa	55 (36)	43 (28)	0 (0)	1.5 (1)	65
Total					811

Figure 5 shows that the lower the use of the morphological plural *-s*, the higher the use of *zero* marking. English language dominant speakers appear to use the morphological plural *-s* more than the other speakers. This might be expected, given the fact that *-s* is a plural marker in English language. It is also evident that the English speakers did not use the postnominal *dem* in their data, which is not found in their dominant language English.

It is pertinent to look at the nature of plural marking in these languages to determine if they are similar to the ones most used in their NPE. If there are similarities between the way plural is marked in these languages and in NPE, it could help explain how the dominant language plays a role in the choice of plural used by the speakers.

Yoruba speakers have a 3rd person plural pronoun that is used as plural marker in Yoruba, but unlike the one found in NPE, it precedes the noun. Yoruba also includes reduplication of adjectives and *zero* marking strategies for plural marking (Ogunmodimu 2014). All these strategies can be seen below in (32-34);

(33) 3rd person plural pronoun as number marker

Àwon olukó yin òga ilé ìwe
3rd-pl pro. **teacher** praise head house-book
'The **teachers** praised the principal of the school.'

(34) Reduplication of adjective

Ile nla nla po ni ilu eko
house big big many in town Lagos
'There are **big houses** in Lagos.'

(35) *Zero* marking

Kole ri **aja** ninu igbo
Kole see **dog** inside bush
'Kole saw a **dog** inside the bush.' **or**
'Kole saw **dogs** inside the bush.' (Ogunmodimu 2014 p. 10)

In (32) above, a 3rd person plural pronoun *Àwon* is used to provide a plural reading for the noun *olukó*. There is also the use of a reduplicated adjective *nla nla* to also signify plural in (33), although it follows the noun it pluralizes, while in NPE, reduplication always precedes the noun. In (34), depending on the context of the conversation, the noun *aja* 'dog' could be plural or singular. If it is plural, then *zero* marking strategy is used. In the data of this study, Yoruba speakers used all the strategies in NPE, but used the morphological plural *-s* more that these, which is not similar to any plural marking strategy in Yoruba. From this distribution, not much can be said for the influence of the dominant language (Yoruba) in the choice of plural marker used by its dominant speakers in NPE.

Hausa, though an African language, belongs to West Chadic branch of the Afroasiatic Language family (Blench 2011). In Hausa, which is the most widely spoken language in Northern Nigeria, plural is marked by nominal inflection and nominal reduplication as seen below in (35-36);

(36) Plural morphology on noun

zabo, zabi 'Guinea fowl, Guinea fowls'

māshì, māsū 'spear, spears'

(37) Nominal Reduplication

bàkā, ***bakunkunâ*** ‘bow, bows’

sūnã, ***sūnànnakī*** ‘name, names’ (Ogunmodimu 2014 p. 10)

As seen in (35), the noun can be inflected upon to mark plural, and in (36) the noun is reduplicated to provide a plural reading. The only Hausa speaker in this study tended to use a lot of *zero* marking (43%), even though there is no *zero* marking strategy of plural marking in Hausa (Ogunmodimu 2014). But since there was only one participant in this category, no generalization can be made, because the differences could be attributable to an idiolectal style of speech to the participant.

Apart from the Hausa speaker, NPE dominant language speakers used somewhat higher rates of *zero* plural marking than the other participants. It was expected that they would use post-nominal *dem* more than other speakers because *dem* is a plural marker in NPE. Although they may have, this is speculation, due to the small quantity of *dem* used in the data overall.

The findings show that English language dominant speakers use *-s* more than the other speakers in the other groups. Furthermore, Yoruba, NPE and Hausa speakers use *zero* marking more than the English speakers. The statistical analysis will show whether any of these differences are statistically meaningful.

4.2.1.1 Linguistic Variables

Animacy:

Nouns with plural reading were divided into human, animate and inanimate nouns, since animacy was significant in the study of Tagliamonte et al (1997). Animate NPs included only

non-human animate nouns. The distribution of plural marking by animacy of the noun, that is, human, animate and inanimate nouns is seen in Figure 6 below. The speakers marked plural for human nouns with the morphological plural *-s* 81% of the time, *zero* marking 16%, and *dem* 1%. For animate nouns, *-s* was categorical, as seen below in figure 6, but given the low number of tokens in this category (n =5), animate and human nouns will be merged together, as 5 tokens is not enough to analyze quantitatively. Since human is a subset of animate, human and animate nouns with plurals are merged together to become *animate* (as earlier stated in section 2.3) bringing the total percentage of *-s* to about 82% as seen in Figure 7.

Figure 6 - Animacy (human, animate and inanimate)

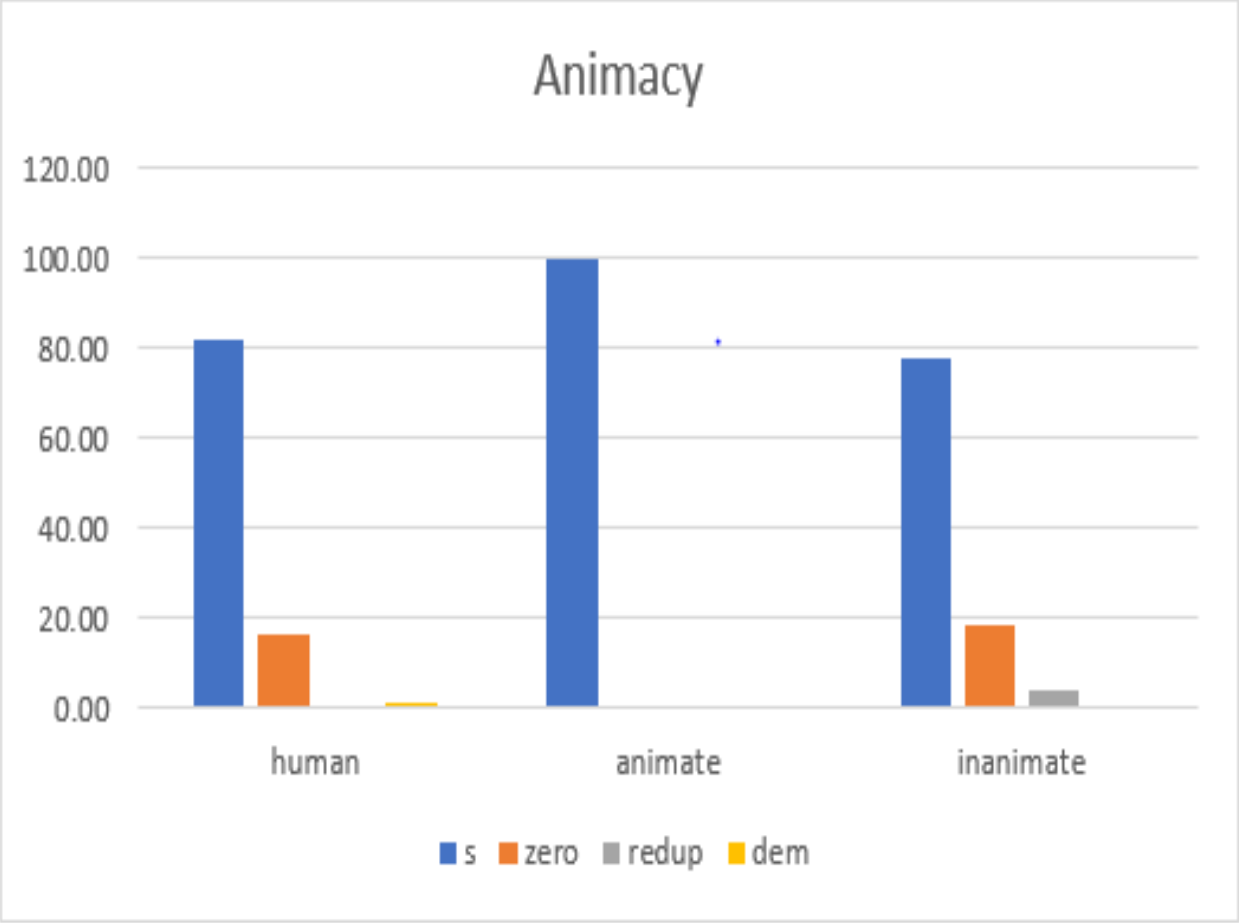
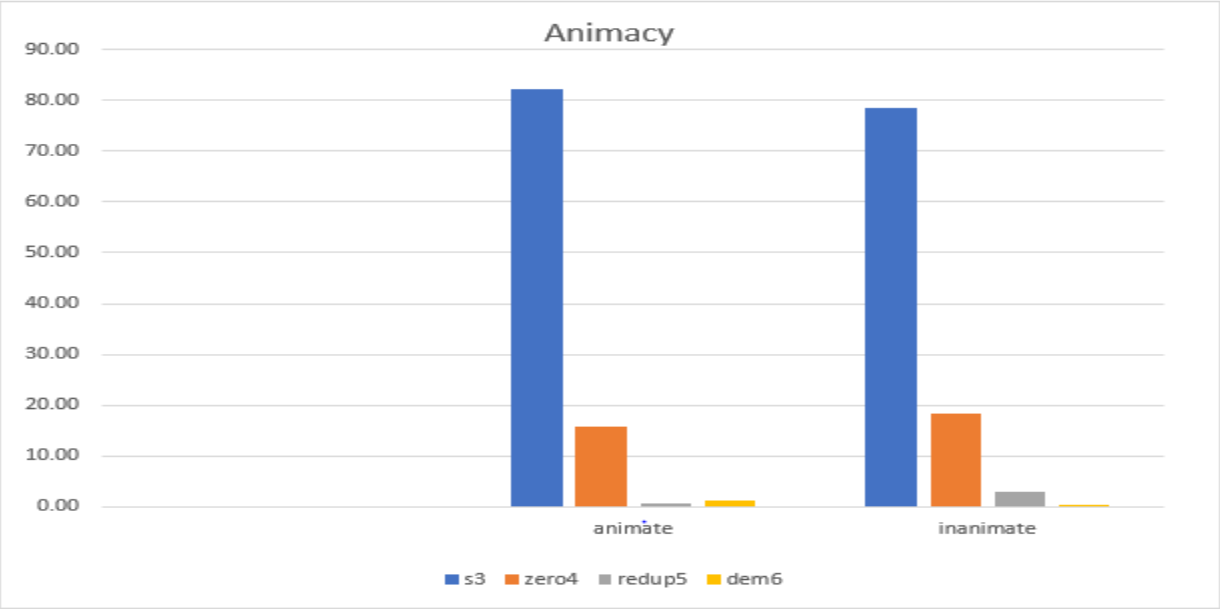


Figure 7 - Animacy (animate and inanimate)



As seen in figure 7, *-s* is the dominant plural used for inanimate nouns that occurred 78% of the time, while *zero* marking occurred 18% of the time. *dem* plural is the least favoured plural that occurred 1% of the time for animate and 0.3% for inanimate nouns. To further clarify, see table 9 below:

Table 9 - Distribution of animate and inanimate nouns

animacy	total no. of tokens	-s % (n)	zero % (n)	redup % (n)	dem % (n)
animate	496	82 (408)	15.9 (79)	0.6 (3)	1.2 (6)
inanimate	315	78 (247)	18.4 (58)	2.8 (9)	0.3 (1)
Total	811				

Type of nominal reference:

Here, I look at the distribution of plural markers based on the reference of the NP. This includes definite, indefinite and generic referent nouns as seen in figure 8 below. Definite nouns vary between *-s* and *zero* marking, where *-s* is the dominant plural used 76% of the time and *zero* marking 22%. There is little to no occurrence of *dem* and *reduplication* for definite nouns. Indefinite nouns use between *-s, zero, reduplication* and *dem,* but favour *-s* (84%) more than *zero* (12%). *Reduplication* and *dem* are the least favoured plurals. For generic referenced plural, there is a choice between *-s, zero, reduplication* and *dem*. But *-s* is the most preferred plural (82%), followed by *zero* marking (12%). *reduplication* and *dem* are the least favoured plurals with an occurrence of about 2% and less than 1% respectively. Table 10 below shows the distribution of plural tokens by nominal reference.

Figure 8 - Type of nominal reference

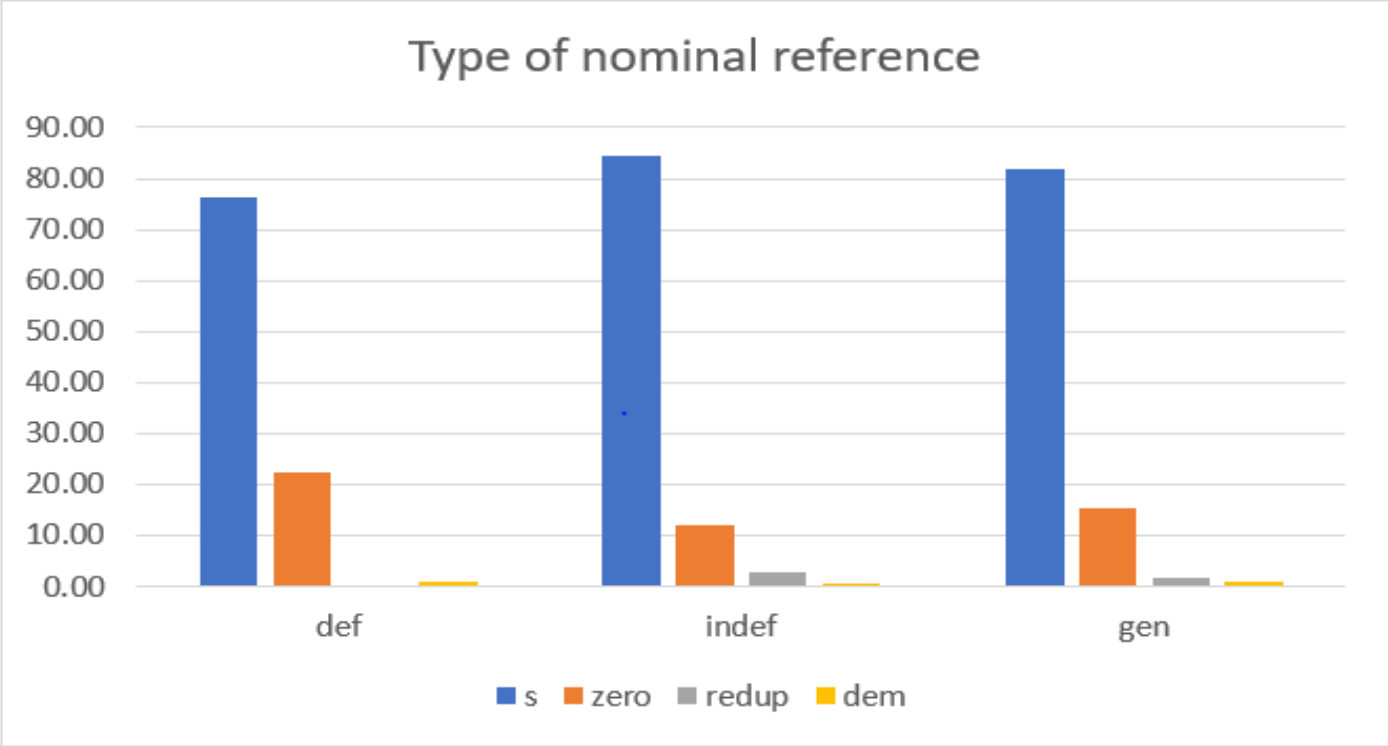


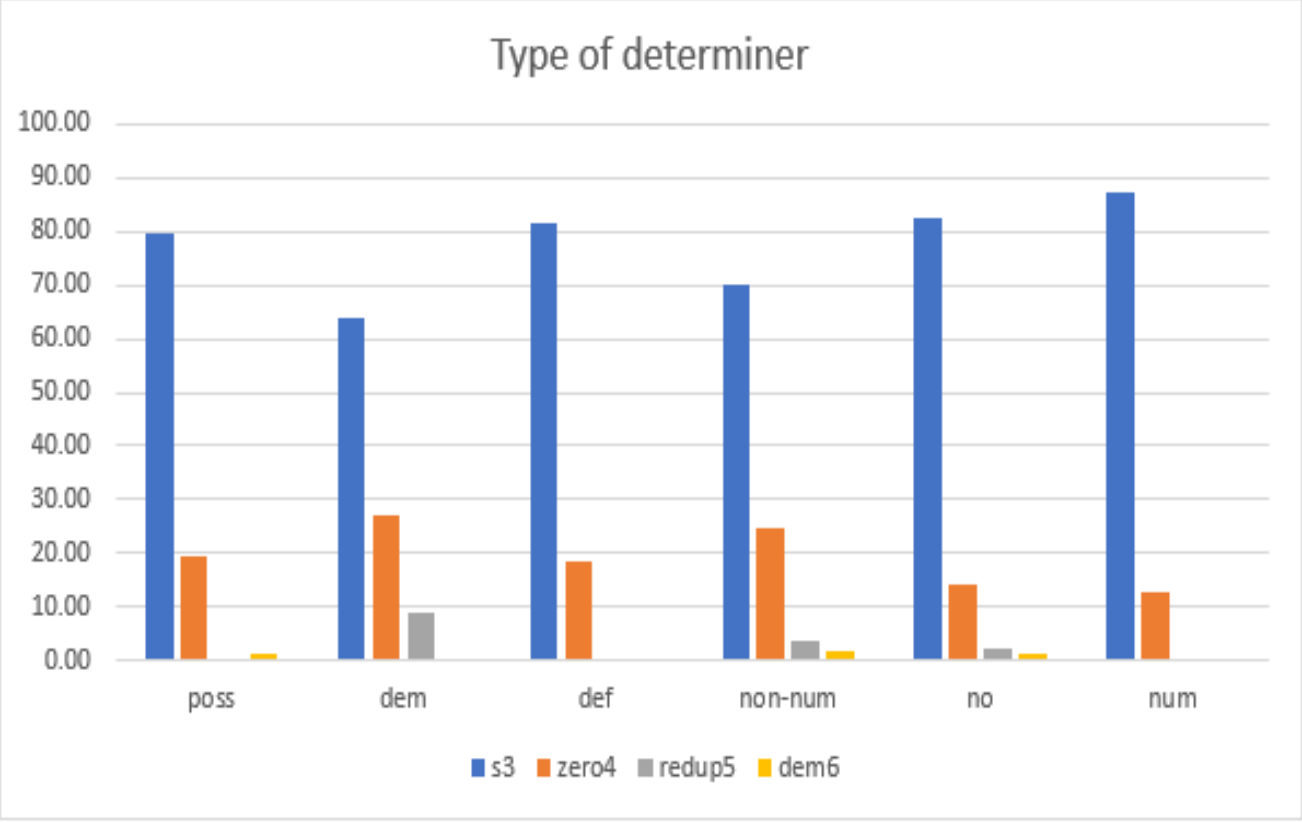
Table 10 showing distribution of plural tokens by nominal reference of the noun

Type of nominal reference	-s % (n)	zero % (n)	redup % (n)	Dem (n)	Total
definite	76 (206)	22.5 (61)	0.3 (1)	1 (3)	271
indefinite	84.5 (263)	12.5 (38)	2.5 (8)	0.6 (2)	311
generic	81 (186)	16.5 (38)	1.3 (3)	0.8 (2)	229

Type of determiner:

The distribution of plurals by the type of determiner of the noun is shown in Figure 9 below;

Figure 9 - Type of determiner



Nouns with possessive determiner use *-s* 79% of the time in the data. *Zero* marking occurred 19% and variant *dem* occurred 1% of the time. *Redup* did not occur in this category. Nouns with demonstrative determiners alternate between *-s* (63%), *zero* marking (27%) and reduplication (9%). Nouns with definite determiner were marked with *-s* plural (81%) and *zero* marking (18%) without the occurrence of *reduplication* and *dem*. Nouns with non-numeral determiners such as *som, a lot of* and others select between all the possible plural markers but favour *-s* (69%) and *zero* marking (24%) more than others (*reduplication* 3%, *dem* 1.7%). Nouns with no determiner favours *-s* (82%) than other plurals, *zero* marking (14%) *reduplication* (2%) and *dem* (1%). Speakers marked nouns with numeric determiner with -s (87%) and *zero* marking (12%). I see that nouns with demonstrative determiners and non-numeric determiners favour *zero* marking up to 27% and 24% respectively and have the least amount of *-s*. Table 11 below shows how the plurals are distributed by type of determiner.

Table 11 - Distribution of plurals by type of determiner

Determiner type	-s % (n)	zero % (n)	redup % (n)	dem % (n)	Total no. tokens
poss	79 (141)	19 (34)	0 (0)	1(2)	176
dem	63 (7)	27 (3)	9 (1)	0 (0)	11
def	81 (36)	18 (8)	0 (0)	0 (0)	44
non-num	69 (79)	24.7 (28)	3.5 (4)	1.7 (2)	113
no	82 (248)	14 (43)	2.3 (7)	1 (3)	301
num	87 (145)	12.6 (21)	0 (0)	0 (0)	166
Total					811

Overall, I have seen that *-s* is the dominant plural used in the data across all variables. The younger speakers use *-s* relatively more than the older speakers while the older speakers use *zero* marking relatively more than the younger speakers. The female speakers use *-s* more than the male speakers, while the male speakers use *zero* marking than the female speakers. *Reduplication* is used more by the younger speakers than the older speakers and while *dem* is not much in the data, it is particularly absent from the speech of the younger speakers. I was expecting to find *dem* in the data, but I did not find many examples. This could be because all the participants of my study are highly educated and *dem* is associated with lower education Ogunmodimu (2014). I cannot say much about this because of the small numbers but this will be further discussed in section 5.5. As *-s* and *zero* marking are the dominant plural markers used, nearly to the exclusion of all other markers, I will look at these two in the next section. As seen in figure 11 (p. 56), even though the morphological *-s* is the dominant plural used in the data, I notice that the older male speakers (based on birth year at the bottom of the chart) tend to use more *zero* marking than other groups of speakers, including the older female speakers.

4.3 Statistical analysis

For the statistical analysis, the variants examined were limited to two: the morphological plural *-s* and *zero* marking. These two were chosen because they were the main plurals used, making up approximately 95% of the data, while the other two factors, the postnominal plural *dem* and *reduplication* of nouns/adjectives were less than 5% of the entire dataset. There was not enough data in the latter two factors to yield any significant results regarding their predictors, and so they were omitted from the analysis with the goal to observe patterns between the two primary plural markers. A generalized linear mixed effect model which contained *speaker* and *noun* as random

effects was fit to the dataset in the R model (McCulloch & Neuhaus 2014). Fixed effects in the model were a two-way interaction between *age category* and *gender*, all social factors (*age*, *gender* and *dominant language*) and the linguistic factors (*animacy*, *type of nominal reference* and *type of determiner*). I expected some of the linguistic predictors like *animacy* and *type of determiner* to be statistically significant because they were found to be significant in Tagliamonte et al (1997) study. The morphological plural *-s* in their study was identified as the most frequently used plural marker, sensitive to animacy. Also, in Ogunmodimu (2014), animate referents strongly favoured *-s* more than inanimate. Therefore, I expected these predictors to be significant. The R code for this model is given in (37).

(38) glmer(plural~gender*age_category+animacy+type_of_nominal_ref+type_of_determiner+dominant_language+(1|speaker)+(1|noun),family=binomial, data = NPEFInal,control=glmerControl(optimizer="bobyqa"))

The statistical results are given in Table 12.

Table 12 Results of statistical analysis

Output of the best-fit model

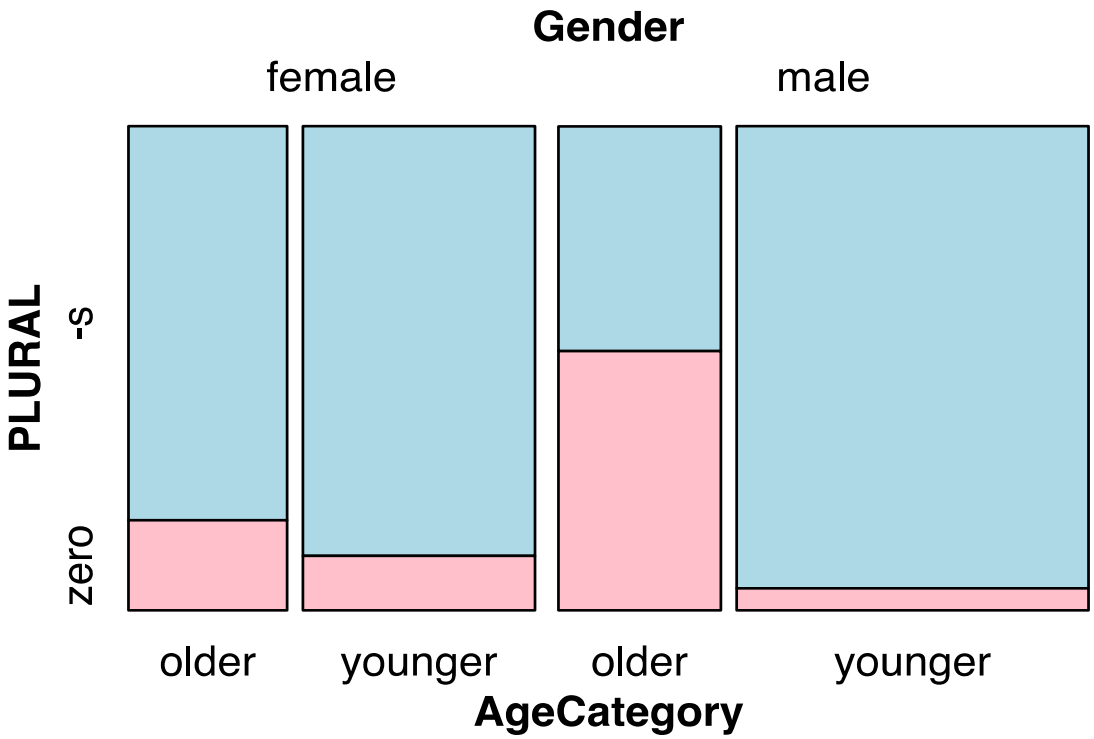
	Estimate	Std.Error	z value	Pr(>|z|)
Intercept	-4.98	1.35	-3.67	0.000234***
AgeCategoryyounger	-0.95	0.75	-1.26	0.20
Gendermale	4.45	0.93	4.77	1.83e-06***
Gendermale:AgeCategoryyounger_	-5.57	1.26	-4.39	1.11e-05***
dominant_languageHausa	6.32	1.08	5.85	4.77e-09 ***
dominant_languageNPE	4.31	0.89	4.81	1.49e-06 ***
dominant_languageYoruba	2.77	0.84	3.26	0.001083 **

The statistical results in Table 12 show the variables that remained after non-significant variables were removed from the model. The variables remaining are *gender* and *dominant*

language, shown by the asterisks under the p value column. None of the linguistic predictors; animacy (animate and inanimate), nominal reference (definite, indefinite and generic) and type of determiner (possessive, definite, demonstrative, non-numeric and no determiner) had a significant effect on the choice of plural forms.

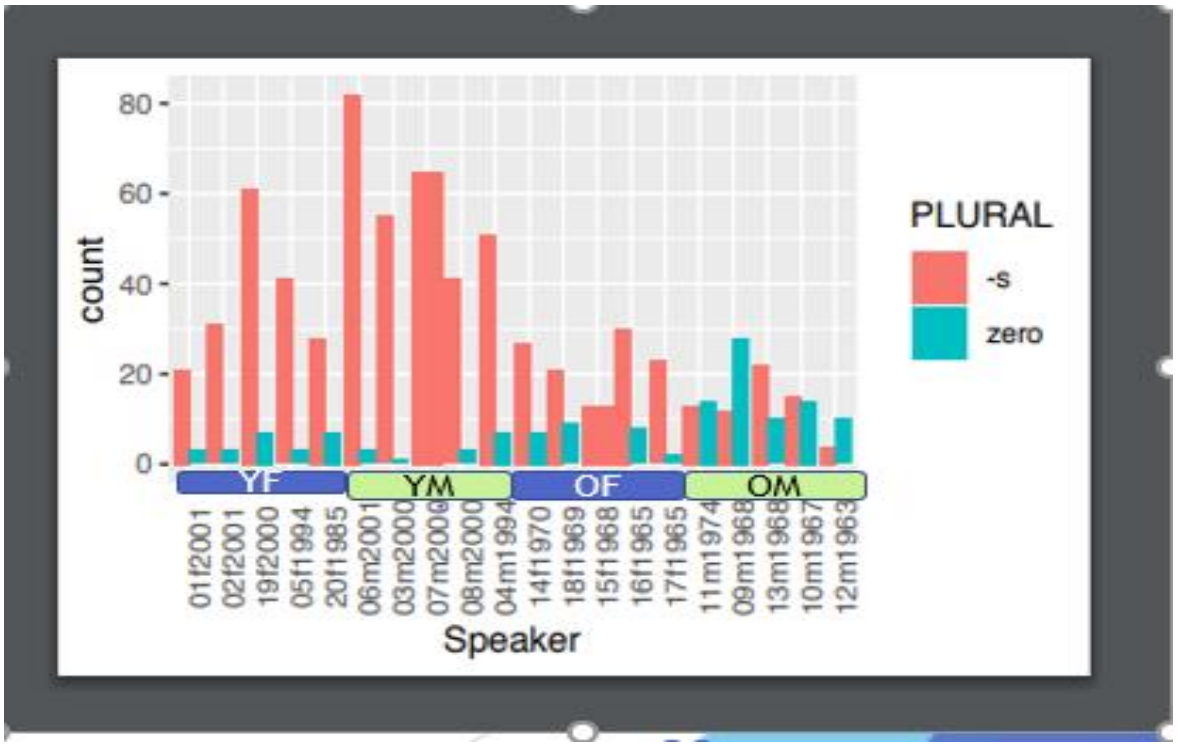
Furthermore, although *age* on its own is not significant, the interaction of *age* and *gender* is. Specifically, while men are statistically less likely to use the plural form *-s*, this is especially true among the older males. As shown in figure 10 and 11 below, the distribution of the two plural forms used by older males is approximately equal, whereas for all other speakers, *-s* is the clear preferred variant. Recall the one speaker in the younger group who is somewhat of an outlier within the group, with a birth year of 1985 while the others had birthyears of 1994-2001. I ran the R code for my model again without this speaker and it did not affect the results for age.

Figure 10 showing age and gender distribution of *-s* and *zero* marking



The tokens (*zero* marking and *-s*) produced by individual speakers are seen below in figure 11. These are organized by gender and age, as indicated by m/f and birth year on each individual's code.

Figure 11 - Distribution of *-s* and *zero* marking by individual speakers



This means that there could be change in progress going on from the use of *zero* marking to *-s* and for the older generation, where the female speakers are ahead in this change. I will discuss this in section 5.2.

Dominant language is also a significant factor in the choice of plural used by speakers of NPE. The statistical analysis confirms the significance of the descriptive results, where *zero* marking is used more by speakers who have Hausa, NPE and Yoruba as dominant languages than those whose dominant language is English.

The statistical analysis suggests that age and gender are the most relevant potential indicator of change in progress. Also, the dominant language of a speaker may play a role in the choice of plural used as the statistical analysis shows. In the next section, I will expand on this.

Chapter 5: Discussion

In section 5.1 I discuss the results of age, gender in 5.2, dominant language in 5.3, linguistic factors in 5.4 and the plural marker *dem* in 5.5.

5.1 Age

As results from the statistical analysis above show, the interaction between age and gender are significant in determining the use of plural markers in NPE. This means that the interaction of both variables is predictive in the choice of plural marker used, not simply the individual variable *age*. Specifically, the older male participants tend to use *zero* marking more than any other speaker groups. The fact that older speakers (specifically the males) favour *zero* marking more than the younger group and the women, is evidence that *zero* marking is the older variant. This is because from literature regarding change in progress, there is often an interaction where younger women lead change in progress, while the older men lag behind (Labov 1963, Tagliamonte 2011, p. 62). This interpretation is strengthened by the contrast between older studies which show *zero* as the main plural in NPE (Faraclas 1989 and Mafeni 1971) and more recent studies with *-s* as the main plural in NPE (Tagliamonte et al 1997, Ogunmodimu 2014 and Deuber 2005).

Recall from section 2.2.2. that the apparent time hypothesis tells us about language change through comparison of the frequency of use of a language feature among different generations of speakers. The difference in the frequency of use of a feature from older to younger generation points us to language change. Therefore, our apparent time study suggests a change in progress in reference to plural marking in NPE from *.zero* marking to *-s. -s* is dominant in the grammar of the younger generation than that of the older generation, with very

little use of the older variants (*zero* marking) respectively. Age on its own is not significant, but it is the interaction of age and gender that is significant.

5.2 Gender

Women used *-s* more than men, who in turn used *zero* marking more. As has been shown in this study, *-s* is a plural marker that is available in English language. English has a higher prestige than NPE because English is the official language in Nigeria (as is discussed in section 1.1.1). We know that women produce linguistic forms that more closely approach that of the standard language than men (Trudgill 1972, Kristian 2018, among others). Based on the results of my study and since *-s* has higher prestige, being affiliated with the English language, this could be the reason that women, particularly in the older generation, use it more than men.

The literature shows us that women tend to lead language change (Eckert 1989), and my data shows that women are using *-s* more than the men. This reinforces the interpretation that this is language change. That is, in addition to the apparent time difference between older and younger people, women are also using the younger people's variant *-s*. The older male speakers are seen to use more of the older variant (*zero* marking) than the newer variant (*-s*). This is supported in Labov (1990), who argues that of all the sociolinguistic principles, the clearest and most consistent one is the contrast between women and men; that the mechanism of change crucially involves the initiating role of women at the outset, and the later adoption of the change by men (Labov 2001, p. 283). An example is seen in Eckert's (1989) study of Detroit English where for the factor gender, girls were found to be leading in different phonological changes like the raising of /ae/, and the fronting of /a/. This pattern where females lead the change correspond with this study's result, with women leading the change from *zero* marking to *-s*. In our study, the two variables (age and gender) interact such

that the older male speakers are still using the older variants while the younger female speakers accelerate in their use of new forms (*-s*). I argue therefore that this study shows that there is a change in progress led by the younger female speakers.

To explain the change from *zero* marking to *-s*, it could be that the more use and exposure of NPE speakers to the formal English language, the more the grammatical features of English are borrowed into NPE (Ogunmodimu 2014). This is made easy because English is the lexifier language for NPE and most of its vocabulary is English. It is therefore common for there to be transfers between both languages. An additional factor adding to language change from *-s* to *zero* marking is that the younger speakers are now exposed to English language as their first language and are later exposed to NPE (as confirmed by most of the younger speakers). So, it could be common for them to use some rules of the grammar of English in NPE, like in plural marking. On the other hand, most older speakers learnt their native language and NPE first before being exposed to English language when they were later enrolled in school (Ihemere 2006). This also shows the influence of dominant language of the speaker which is discussed in section 5.3 below.

Ogunmodimu (2014) is the only sociolinguistic study on plural marking that set out to look at speaker gender as a factor, stating in passing the absence of significant differences for speaker gender (p.15), without showing the distributions. The author did not mention the number of male and female participants in his study and only age ranges were provided (22-59, 28-25). Tagliamonte et al (1997) did not look at age and gender differences either. Therefore, there are no previous studies with which I can compare the age and gender distribution of my study. My study is the first to compare ages and provide an even distribution of male and female, older and younger generation of participants. Because of this, I am able to see more clearly that this is a change in progress. Ogunmodimu (2014)

stated that there was no significant difference in the use of plural markers by gender which is significant in my study. His result may have been different since it is also the interaction of age and gender that is significant for the choice of plural used in NPE.

5.3 Dominant Language

Apart from looking at *-s* and *zero* marking as the newer and older variant respectively, which coincide with the distributional use of these markers by speaker age and gender, it is important to discuss the factor dominant language, since it was found to be significant in the statistical analysis. As seen in figure 5 (p. 43), Yoruba, NPE and Hausa language-dominant speakers used *zero* marking more than the English-dominant language speakers. This may be because in Yoruba and NPE, *zero* marking can be used as a plural marking strategy. Therefore, for the Yoruba speakers, it could be as a result of substratum influence, as suggested in previous research (Tagliamonte et. al 199, Ogunmodimu 2014), and for the NPE speakers, it may be because NPE is their dominant language. As mentioned earlier, not much can be said concerning the Hausa dominant language speaker, because only one participant spoke Hausa as a dominant language. No generalization can be made, because the difference could be as a result of the speaker's idiolect. I have seen that the Yoruba, NPE and Hausa dominant language speakers use *zero* marking more than the English speakers which shows that dominant language is a significant factor for the choice of plural used in NPE.

Ogunmodimu (2014) lists the types of plural marking strategies used in some Nigerian languages, including Yoruba, where there is the use of a third person plural pronoun as a number marker (preceding the noun), *reduplication* of adjectives and *zero* marking. I expected that Yoruba-dominant language speakers would use postnominal plural *dem* and reduplication of

adjective/noun more to mark plural marking, if these occurred in my data, because these srtategies are present in the language, but this was not the case. I did not specifically stratify for dominant language, and so there is not enough data for each dominant language in my data for a more effective conclusion. It could be a good path for future research, as it was statistically significant in my study.

5.4 Linguistic Factors

Contrary to Tagliamonte et al's work, which found determiner and animacy to be significant in the choice of plural marker used, my study did not find any linguistic factor that predicts the use of a particular plural variant in a statistically significant way. Tagliamonte et al. (1997) state that it is generally the case that NPs ranking higher on the animacy hierarchy (e.g. those referring to humans) feature a number distinction, while those ranking lower do not. So, the factor of animacy may be expected to exercise a statistically significant effect on the presence of overt and null markers, with animate nouns favouring the former. Animate NPs appear to be somewhat more likely to take *-s*, but it was not significant in this study. For nominal reference, the predictions of Tagliamonte et al (1997) was that overt marking will occur more in definite contexts, though definiteness was not a statistically significant factor in their data. In my data, this is not the case, as definite NPs had the most *zero* marking used to signal plural. It was also predicted that generic reference would surface without overt marking, and NPs with generic referents in their data showed a greater propensity to surface bare than any other NP type. This is still not the case in the data of this study, since generic did not have any significantly large amount of *zero* marking used as seen in figure 8 above (p. 50). I also expected that *dem* would favour definite NPs because in other creoles like Jamiekan and Gullah, *dem* is used with definite

nouns (Mufwene 1986). I cannot say the same for NPE, however, because I do not have enough data for *dem* in this study.

For type of determiner, although demonstrative determiners occurred only a few times in the data (11 times), nouns with demonstrative determiners and non-numeric determiner favour *zero* marking more than the other determiner types as seen in figure 9 above (p. 53). Again, in Tagliamonte et al's study, NPs with number-neutral determiners such as possessive, definite and bare nouns favoured null marking on plural nouns, while those with number transparent determiners, i.e., numeric and non-numeric quantifiers, tend towards overt marking with *-s*. According to the authors, it countered the received wisdom about plural marking in creoles, which is that overt marking should be favoured in contexts where plurality has not been otherwise disambiguated in the NP headed by the noun in question. This may explain why nouns with demonstrative determiners and non-numeric determiners which are not supposed to favour overt marking (in this case *-s*) is at least seen as slightly favouring *zero* marking more than others in my data (see figure 12 below). Although I found no statistically significant linguistic factors in my study, it is possible that with more data, a different result may be obtained.

5.5 The Plural Marker *dem*.

This study arose from the question of the disappearance of *dem* as a plural marker in NPE as obtained in previous research (Tagliamonte et al. 1997, Ogunmodimu 2014). As a native speaker who still uses *dem* as a plural marker in my grammar of the language, I believed an explanation of this could be that there is a change in the language as it relates to the use of plural markers. This change from the use of *dem* to *-s* could be as a result of borrowing from the lexifier language, English over the years (Ogunmodimu 2014). Since none of these studies (Tagliamonte

et al. 1997 and Ogunmodimu 2014) looked at age as a factor of this change, it was expected that this study would find that the older speakers use more of *dem* as their plural marker than *-s* and vice versa for the younger speakers. Though this was the case, there were just few tokens (7) of *dem*. Both my study and Tagliamonte's study target educated participants, so in order to find *dem*, maybe education should be one of the factors investigated. Deuber (2005) also argued that the use of postnominal *dem* as a plural marker has disappeared from the speech of the average educated NPE speaker, *-s* becoming the norm (p. 119). This suggests that education plays a major role in the choice of plural marker used in NPE. As put by Ogunmodimu (2014), my data may be limited in scope and may not be a good sample of NPE speaking community, given that all the interviewees are educated middle class Nigerians living in Canada. However, Ogunmodimu's study of the same variable, that investigated ethnicity (interviewing participants from different ethnic groups in Nigeria) and education, did not produce different results, as *-s* was the dominant plural marker used in his data and *dem* the least, occurring 9 times out of 449 tokens. This has led me to consider other reasons for the low occurrence of *dem*.

Since NPE is spoken in different geographical areas of Nigeria, and has been nativized in some areas like the Niger Delta part of the country (Agheyisi 1988), it could be the case that the variety of pidgin spoken and the education of the speaker could play major roles in the use of plural marking in the language. This is supported by Ogunmodimu (2014) who states that *dem* is still commonly used as a plural marker in the NPE variety spoken regions where NPE is nativized like in the Niger Delta and the South Eastern part of the country as confirmed by data collected in his field work. But Benin, Warri, and Sapele were the only Niger Delta regions that his participants who used *dem* were from, but he did not have participants from Port Harcourt, the capital of Rivers state where I acquired my grammar of NPE, and where NPE is spoken as a

first language of many (Ihemere 2006). This may be a reason why there was not much *dem* in his data. Faraclas's (1989) study was based on transcribed interviews of Nigerians living in Port Harcourt between 1985 – 1986 and he stated that *dem* is the main plural used in NPE. The *dem* plural may still be a strategy used often by people in this area who are native speakers, possibly uneducated speakers who do not have a command of the formal English language. This is still supported in the Goldvarb result for *dem* in Ogunmodimu's (2014) study that shows that the speaker's education level is a significant factor, with higher levels of education disfavoring *dem*.

Conclusions

In this quantitative study, the use of plural markers in NPE as investigated. The variants of the study were the morphological plural *-s*, *zer*o marking, *reduplication* of adjectives/nouns and postnominal plural *dem*. The social factors investigated were *age*, *gender* and *dominant language* and the linguistic factors investigated were *animacy*, *determiner type* and *nominal reference*. The distributional analysis shows that *-s* is the dominant plural used in NPE and mostly by the younger speakers. The younger speakers used *reduplication* of adjectives/nouns more than the older speakers. The other two plural marking strategies, *dem* and *zero* marking were found to be common among older speakers. The dominant markers, *-s* and *zero* marking, were further analyzed statistically using R. The statistical results showed that the interaction of the social variables age and gender is significant in the choice of plural marker used. Specifically, the older male speakers use *zero* marking significantly more than the variant *-s*. Gender was also significant, with *-s* being associated more with female speakers and *zero* marking being associated more with male speakers. Dominant language (NPE, Yoruba and Hausa) was also found to be significant, which may indicate substratum influence. The linguistic factors were not significant, and this could be as a result of insufficient data, since it was found to be significant in previous studies (Tagliamonte et al 1997, Ogunmodimu 2014).

The fact that older literatures (Faraclas 1989, Mafeni 1971, Agheyisi 1971) recognized *dem* as the dominant plural marker, while more recent studies (Tagliamonte 1997, Deuber 2005, Ogunmodimu 2014) including this study shows that *-s* is the dominant plural marker with a rare occurrence of *dem* in the data, indicates that there is a change going on in the language, at least among educated middle-class speakers. This study has shown that the younger generation of speakers and the female speakers are the leaders of this change and the older male speakers are

slower to adopt this change, which conforms with results from previous sociolinguistic studies (Labov 2001, Tagliamonte 2011). This study is therefore a good indication that there is a change in progress in the plural marking in NPE, at least for middle-class educated individuals. The change could also be as a result of familiarity with English or as a result of the prestige of English. Further studies could investigate education and geographical area (specifically Port Harcourt-Nigeria) as factors that could affect that use of plural markers in NPE.

References

Afolayan, A., & Bamgbose, A. (1980). The changing pattern of bilingualism in Nigeria. In E. Afendras (Ed.), *Patterns of bilingualism* (pp. 217–237). Singapore University Press.

Agbali, A. A. (2005). Nigerian Pidgin English, urban spaces and the construction of social identity. In T. Falola, & S. J. Salm (Eds.), *Urbanization and African cultures* (pp. 295–321). Carolina Academic Press.

Agheyisi, R. (1984). Minor languages in the Nigerian context: Prospects and problems. *Word, 35*(3), 235–253.

Agheyisi, R. (1988). The standardization of Nigerian Pidgin English. *English World-Wide, 9*(2), 227–241.

Akande, A. T. (2010). Is Nigerian Pidgin English English? *Dialectologia et Geolinguistica, 18*(0), 3–22.

Akande, T., & Oladipo, S. L. (2010). Use and attitudes towards Nigerian Pidgin English among Nigerian university students. In R. M. Millar (Ed.), *Marginal dialects: Scotland, Ireland, and beyond* (pp. 70–89). Publications of the Forum for Research on the Languages of Scotland and Ulster.

Akinyemi, A. I. (2014). Demographic dynamics and development in Nigeria. *African Population Studies, 27*(2), 239–248. https://doi.org/10.11564/27-2-471

Ayeomoni, M. O. (2012). The languages in Nigerian socio-political domains: Features and functions. *English Language Teaching, 5*(10), 12–19.

Barbag-Stoll, A. (1983). *Social and linguistic history of Nigerian Pidgin*. Stauffenberg Verlag.

Blench, R. (2012). *An atlas of Nigerian languages*. Kay Williamson Educational Foundation. http://www.rogerblench.info/Language/Africa/Nigeria/Atlas%20of%20Nigerian%20Languages-%20ed%20III.pdf

Boberg, C. (2004). Real and apparent time in language change: Late adoptions of change in Montreal English. *American Speech 79*(3), 250–269.

Chambers, J. K. (2002). Patterns of variation including change. In J. K. Cambers, & N. Schilling (Eds.), *The handbook of language variation and change* (pp. 358–361). John Wiley & Sons.

Decamp, D. (1971). Introduction: The study of pidgin and creole languages. In D. Hymes (Ed.), *Pidginization and creolization of languages: Proceedings of a conference held at the University of West Indies, Mona, Jamaica, April 1968* (pp. 13–39). Cambridge University Press.

Deuber, D. (2005). *Nigerian Pidgin in Lagos: Language contact, variation and change in an African urban setting*. Battlebridge Publications.

Eckert, P. (1989). The whole woman: Sex and gender differences in variation. *Language Variation and Change, 1*(3). 245–267.

Efroymson, M. A. (1960). Multiple regression analysis. In A. Ralston, A., & H. S. Wilf (Eds.), *Mathematical methods for digital computers* (pp. 191–203). John Wiley & Sons.

Faraclas, N. G. (1989). *A Grammar of Nigerian Pidgin*. [Doctoral Dissertation, University of California at Berkley]. Berkley Linguistics. http://escholarship.org/uc/item/1wv209q5

Ferguson, C. A. (1959). Diglossia. *Word, 15*(2), 325–340.

Gauchat, L. (1905). L'unite phonetique dans le patois d'une commune. In *Aus Romanischen Sprachen Und Literaturen: Festschrift Heinrich Morf* (pp. 175–232). Max Niemeyer. https://archive.org/details/ausromanischensp00morfuoft

Gayawan, E., Arogundade, E., & Adebayo, S. (2014). Possible determinants and spatial patterns of anaemia among young children in Nigeria: A Bayesian semi-parametric modelling. *International Health,* 6(1). https://doi.org/10.1093/inthealth/iht034

Gerrit, J. K., & Willeminj, J. D. (2016). How multiple sources of experience influence bilingual syntactic choice: Immediate and cumulative cross-language effects of structural priming, verb bias, and language dominance. *Bilingualism: Language and Cognition,* 19(4), 710–732. https://doi.org/10.1017/S1366728916000420

Ghomeshi, J., & Holness, T. F. (2018). Additive and associative plural marking in Jamiekan. In E. Dmyterko *(Ed.), Proceedings of the 2018 annual conference of the Canadian Linguistics Association.* https://cla-acl.artsci.utoronto.ca/wp-content/uploads/actes-2018/Ghomeshi-Holness-2018.pdf

Hofwegen, J., & Wolfram, W. (2010). Coming of age in African American English: A longitudinal study. *Journal of Sociolinguistics*, *14*(4), 427–455.

Holm, J. (1989). *Pidgin and creoles* (Vol 2: Reference survey). Cambridge University Press.

Ihemere, K. U. (2006). An integrated approach to the study of language attitudes and change in Nigeria: The case of the Ikwerre of Port Harcourt City. In F. A. Olaoba, & A. P. Michael (Eds.), *Proceedings of the 36th annual conference on African linguistics* (pp. 194–207). Cascadilla Press.

Kootstra, G. J., & Doedens, W. J. (2016). How multiple sources of experience influence bilingual syntactic choice: Immediate and cumulative cross-language effects of structural priming, verb bias, and language dominance. *Bilingualism: Language and Cognition*, *19*(4), 710–732.

Kristian, S. (2018). Social Aspiration and Traditional Speech Features among Rural Newfoundland Youth. *Rural Voices: Language, Identity, and Social Change across Place*, 143-164.

Labov, W. (1963) The Social Motivation of a Sound Change. *WORD, 19*(3), 273-309, DOI: 10.1080/00437956.1963.11659799

Labov, W. (1966). *The social stratification of English in New York City.* Cambridge University Press.

Labov, W. (1972). The social motivation of a sound change. In W. Labov (Ed.) *Sociolinguistic patterns* (pp. 1–42). University of Pennsylvania Press.

Labov, W. (1990). The intersection of sex and social class in the course of linguistic change. *Language Variation and Change*, *2*(2), 205–254.

Labov, W. (2001). *Principles of linguistic change: Social factors*. Blackwell.

Lyons, C. (1999). *Definiteness*. Cambridge University Press.

Mafeni, B. (1971). Nigerian pidgin. In J. Spencer (Ed.), *The English language in West Africa*, (pp. 95–112). Longman.

Mufwene, S. S. (1986). Number delimitation in Gullah. *American Speech*, *61*(1), 33–60.

McCulloch, C. E., & Neuhaus, J. M. (2014). Generalized linear mixed models. *Wiley StatsRef: Statistics Reference Online*. John Wiley & Sons. https://doi.org/10.1002/9781118445112.stat07540

Mowarin, M. (2013). Determiners and adjectives in English and Nigerian pidgin-A contrastive inquiry. *English Linguistics Research, 2*(2), 160-171.

Nagy, N., & Meyerhoff, M. (2015). Extending ELAN into variationist sociolinguistics. *Linguistics Vanguard*, *1*(1), 271–281.

Ogunmodimu, M. (2014). Plural marking strategies in Nigerian Pidgin English (Naija). *Fleur de Ling: Tulane University Working Papers, 1*(1), 143–160.

Ogunmodimu, M. (2015). Language policy in Nigeria: Problems, prospects and perspectives. *International Journal of Humanities and Social Science, 5*(9), 154–160.

Omachonu, G. S. (2015). Language documentation: A dependable linguistic practice for minimizing the effects of endangerment on languages in Nigeria. In O. Ndimele (Ed.), *Language endangerment: Globalisation and the fate of minority languages in Nigeria* (pp. 1–16). African Books Collective.

Quené, H., & Van den Bergh, H. (2008). Examples of mixed-effects modeling with crossed random effects and with binomial data. *Journal of Memory and Language*, *59*(4), 413–425.

Reed, H. E., & Mberu, B. U. (2014). Capitalizing on Nigeria's demographic dividend: Reaping the benefits and diminishing the burdens. *African Population Studies, 27*(2), 319–330. https://doi.org/10.11564/27-2-477

Reiter, N., & Frank, A. (2010). Identifying generic noun phrases. In J. Hajič, S. Carberry, S. Clark, J. Nivre (Eds.), *Proceedings of the 48th annual meeting of the Association for Computational Linguistics* (pp. 40–49). Association for Computational Linguistics. https://www.aclweb.org/anthology/P10-1005

Sankoff, G. (2003, January 3). *Overcoming the transmission problem: The [r]→[ʀ] change in Montreal French* [Conference Presentation]. Linguistic Society of America Annual Meeting, Atlanta, GA, United States.

Sankoff, G. (2006). Age: Apparent time and real time. In K. Brown (Ed.), *Encyclopedia of language and linguistics*, (pp. 110–115). Elsevier.

Singler, J. V. (1991). Phonology in the basilect: The fate of final consonants in Liberian Interior English. *Studies in African Linguistics*, *22*(1), 1–44.

Sloetjes, H., & Wittenburg, P. (2008). Annotation by category - ELAN and ISO DCR. In N. Calzolari, K. Choukri, B. Maegaard, J. Mariani, J. Odijk, S. Piperidis, & D. Tapias (Eds.), *Proceedings of the Sixth International Conference on Language Resources and Evaluation (LREC'08)* (pp. 816–820). European Language Resources Association (ELRA). http://www.lrec-conf.org/proceedings/lrec2008/pdf/208_paper.pdf

Tagliamonte, S., Poplack, S., & Eze, E. (1997). Plural marking patterns in Nigerian Pidgin English. *Journal of Pidgin and Creole Languages*, *12*(1), 103–129.

Tagliamonte, S., & D'Arcy, A. (2009). Peaks beyond phonology: Adolescence, incrementation, and language change. *Language,* 85(1), 58–108.

Tagliamonte, S. A. (2011). *Variationist sociolinguistics: Change, observation, interpretation*. John Wiley & Sons.

Todd, L. (1974). *Pidgins and creoles.* Routledge & Kegan Paul.

Trudgill, P. (1972). Sex, covert prestige, and linguistic change in the urban British English of Norwich. *Language in Society*, *1*, 179–195.

Winter, B. (2013). Linear models and linear mixed effects models in R with linguistic applications. *arXiv:1308.5499*. http://arxiv.org/pdf/1308.5499.pdf

Wolfram, W. A. (1969). *A sociolinguistic description of Detroit Negro speech* (Urban Language Series, 5). Center for Applied Linguistics.

Walker, J. A. (2010). *Variation in linguistic systems*. Routledge.

Appendix

List of questions for the Sociolinguistics interview in NPE (translated in English)

1. Abeg tel mi somtin abaut ur bakgroun?.
   - Hu bi ur papa an mama, granpapa an granmama?
   - Wia dem (bin) from?
   - Wia dem de naw an wetin dem de du?

2. Abeg tel mi abaut haw yu take gro .
   - Wia yu bin de, gro op?
   - Haw e bin de wen yu de di ples? Yu get memories wey sti de fresh fo yur main yu fo laik sher?
   - Wia u bin de go skul? tel mi abaut di skul, di students, di tichas.
   - Haw yu bin de tek go di skul? Haw di skul bin de? Which kain subject dem bin de tich dia?
   - Haw meni klas wey yu finish dia, or yu bin cheng skul?
   - Tel mi abaut di frend dem wey yu bin get dat taim? How dem bin de?
   - Wetin yu bin de like du fo fun wit yur frend dem?, laik d kain ple una bin de laik?
   - Wich religion una de praktis? Wich choch or mosk una de go, if eni de?

3. Wich language yu bin de spik wen yu de grow op?
   - Wich language dem wey pipu araund yu bin de spik?
   - Wich language dem yu de spik naw?

4. (For people who indicate they speak more than one language)
   - If yu de spik pas wan language, wich wan yu sabi speak pas?
   - Yu de use difrent language fo diferent tins?
   - You de mix di language wen you de tok somtaims?
   - Giv ezampul of haw yu de tek mix d language dem?
   - Yu de eva mix am wit persn wey sabi spik ol of dem?

5. Mek we tok abaut yur experience fo Winnipeg
   - Haw e tek difrent from haus (Nigeria)
   - Tel mi abaut yur fest winta espiriens
   - Haw yu si skul hia an skul fo haus? Wich wan yu laik pas? Wai? (for students)
   - Wetin yu mis pas fo Nigeria
   - Wetin yu fo laik go bak haus go du?
   - Wat of yur frends fo haus, yu de mis dem?
   - Yur papa, mama an yur family membas dem, wetin yu mis abaut dem?

6. You feel se awa traditions dem de impotant? Wetin mek yu tink laik dat?
   - Yu fit tel me abaut di wans yu sabi?

7. (for people with children)
   - Wia yur chudren (grandchudren) de/bin go skul?
   - Yu fit tel me tins abaut di skuls?
   - Wetin dem tich dem fo di skul?
   - Yu fil se dem de teach dem wel?
   - Wich language dem de spik or len for di skul?
   - (if the children are still not adults) wetin yu hope se dem go bicom?
   - Wetin bi d difrens bitwin di laif yu bin get nd di wans wey yur chudren get naw?
   - Wich kain values and sense wey yu de tich yur chudren?

8. E get eni oda tin yu fo laik gist me?

English:

9. Please tell us something about your background.
   - Who are your parents and grandparents?
   - Where did they come from?
   - What brought them to Winnipeg?

10. Please tell us something about how you grew up.
    - Where did you grow up?
    - What was it like there? Do you have any memories?
    - Where did you go to school? Tell us something about the school, the students, the teachers.
    - How did you get to school? What did the schoolday look like? What subjects were you taught?
    - Which grades did you complete?
    - Who were your friends? What were they like?
    - What kinds of things did you do for entertainment, such as hobbies or sports?
    - What church or religious group did you and your family attend, if any?

11. Which languages did you grow up with?
    - Which languages did the people around you speak?
    - Which languages do you speak now?

12. (For people who indicate they speak more than one language)
    - If you speak more than one language, which one do you feel you speak best?
    - Do you use different languages in different circumstances or with different people?
    - Do you ever mix up your languages?
    - Do you ever accidentally use a word from the wrong language?
    - Do you ever use both languages in a conversation with someone who is fluent in both?

13. Let us talk about your experience in Winnipeg.
    - How does it differ from home (Nigeria)?
    - Tell me about your first winter experience
    - How do find schooling here compared to schooling in Nigeria? (for students)
    - What do you miss most about/in Nigeria?
    - What would you love to go back to Nigeria to do if you have the opportunity?
    - Tell me about your friends back home. Do you miss them?
    - What about people in your family (if they are still in Nigeria) do you miss them? If yes, what do you miss most about being with them?

14. Do you feel that tradition is important? Why or why not?

    - Can you tell me about the ones you know?

15. (for people with children)
    - Where do/did your children go to school?
    - Can you tell us something about the school(s)?
    - What do/did they teach them?
    - Do they get the programming they need?
    - Which languages are/were they learning?
    - (if the children are still not adults) What do you hope for your children's future?
    - What is different between your children's lives and your life as a child?
    - What values and knowledge do you teach your children?

16. Is there anything else that you would like to tell us?