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The Structural Simplification Hypothesis and the Premodifiers in Nigerian English

Abstract

This paper conducts a corpus-based study of the occurrence/non-occurrence, structural pattern, and forms of the premodifier in the Nigerian English noun phrase, comparing the scenarios that emerge with those of the British and Ghanaian varieties of English. These three phenomena, which are crucial to the nature of premodifier in new varieties of English, are investigated in relation to predictors representing syntactic function, register, post-dependent syntactic weight, and animacy, showing, among other things, the extent to which structural complexity/simplicity is present in the structure of the premodifiers studied. Corpus findings indicate that premodifiers are more likely to occur (53%) than not (47%) and that simple premodifiers (i.e. one-word premodifier structural pattern (79%)) are significantly preferred to complex premodifiers (i.e. two-word at 17% and longer patterns at 4%). Relating to form, single premodifiers are most likely to be realized as adjectives. It is also found that the alternation between simple and complex premodifiers is most strongly predicted by the syntactic functions that the NP performs, as well as the syntactic weight present in the post dependent slot. Register, which is reputed as a very strong indicator of structural variation (Schils and De Haan 1993; Biber et al. 2007; Schilk and Schaub 2016) is outweighed by syntactic function and post-dependent weight.

1. Introduction

Evidence in the literature on New Englishes points in a direction that shows new varieties of English exhibit simpler constructions than the established varieties (Görlach 1998; Schilk and Schaub 2016; Akinlotan and Housen 2017; Akinlotan 2018a). Meanwhile, this structural simplification hypothesis has been shown manifesting in a varying degree in different new varieties, given different language internal and external variables being tested out (Görlach 1998; Schneider 2007). As the available literature suggests (for example, Lamidi 2007; Alo and Mesthrie 2008; Babalola 2010; Gut 2014), no previous work showing structural peculiarities of the Nigerian variety of English has provided corpus evidence

on the extent to which premodification syntactic slot manifests the structural simplification hypothesis. Although the contribution of the premodification slot to the complexity/simplicity of a noun phrase (NP) has been shown in several new varieties including the Indian, Jamaican, and Nigerian varieties of English (Schilk and Schaub 2016; Akinlotan and Housen 2017; Akinlotan 2018a), the present study zooms in on the internal structure and structural complexity of the premodifier in the Nigerian variety of English.

Using quantification corpus linguistics methods, this paper investigates the extent to which the structural simplification hypothesis in new varieties is manifested by the structure and complexity/simplicity of the premodification process. On the one hand, the structural pattern of the premodifier, which deals with making choices between a simple and a complex premodifier such as choosing between a one-word premodifier (for example, consider the one-word premodifier *educated* in the NP *an educated President*) versus a complex premodification (consider and compare the three-word premodifier *young educated Nigerian* in the NP *young educated Nigerian President*), will be investigated. On the other hand, the syntactic form of lexical choices functioning in the premodification process as a noun modifier, an adjectival modifier, an adverb modifier, or as a noun+adjective modifier will also be examined. Following the fact that previous studies have shown that different variables ranging from internal to external ones influence the structural pattern and form choices of the premodifier structure, these two phenomena will be studied in relation to the commonly known variables representing syntactic function, register, syntactic weight, grammatical definiteness, and formality of text, showing, for example, where we might find simple or complex premodifier. Moreover, following the predictability of NP complexity on the basis of different predictors representing syntactic function, register, syntactic weight, and definiteness, one can assume that the premodification slot is strongly influenced by one, two or all of these predictors. In the section that follows, these variables are discussed, showing the extent to which they influence similar structural choices in other syntactic structures.

2. Predictors influencing premodifier in English

2.1 Syntactic function

The syntactic function of an NP within a clause structure influences its internal structure (Meunier 2000; Schilk and Schaub 2016; Akinlotan and Housen 2017). Gisborne (2003) investigated the internal structure of the NP within the relative clause, while Hudson-Ettle and Nilsson (2002) investigated complexity in the premodification unit. According to the findings in Schilk and Schaub (2016) and Akinlotan and Housen (2017), the NP at the subject position in a clause structure

is likely to be structured simpler than the NP at the non-subject position. Given that simplified NP structure implies absence of a certain structural element such as a premodifier, then premodification is unlikely to occur when the NP is positioned at the argument slot in a clause structure. On the other hand, premodification is likely to occur when the NP is found at positions such as subject complement, preposition complement, direct and indirect object, and so on. Furthermore, the nature of premodification complexity, that is, whether premodification is one-, two-, three-, four- word structured, becomes predictable on the basis of the syntactic position that the actual NP occupies (Aarts 1971; Meunier 2000). Schilk and Schaub (2016) found that subject NPs in similar new varieties are likely to use premodifier, though with high variability in their complexity/simplicity. Also the literature shows that syntactic function as a predictor can be operationalized in two ways. Aarts (1971), Meunier (2000), Akinlotan and Housen (2017) and Akinlotan (2018a) employed a multi-dimensional approach, accounting for more than two syntactic positions of the NP; Schilk and Schaub (2016) employed a binary approach, accounting only for subject versus non-subject positions. In this binary approach, non-subject position collapses into onefold all other syntactic positions such as subject complement, apposition, direct object, indirect object, object complement, preposition complement, and adverbial. In the multidimensional approach, which the present study follows, each of these collapsed syntactic positions is independently accounted for.

2.2 Register

Evidence showing the influence of register on constructional choices has been shown in different varieties (Wahid 2013; Schilk and Schaub 2016; Akinlotan and Housen 2017; Akinlotan 2018a). More specifically, register has been shown to influence the presence/absence and structure of premodifier (Biber et al. 1999): complex premodifier is more likely to occur in academic or scientific register than in non-academic or scientific texts. In other words, simple-structured premodifier is more likely to occur in interactional texts than in academic/scientific text types. Relatedly, the impact of text type/register on the distribution of internal structure of NPs in different varieties investigated in Schilk and Schaub (2016) and Akinlotan and Housen (2017) correlates with De Haan (1993). De Haan had earlier hypothesised that non-fictional texts are more likely to produce complex premodifier structures. Schilk and Schaub (2016) also found somewhat strong effect of text type on the internal structure of the NP. It is shown that complex NPs found in academic texts are a result of complex premodifier filling up the premodification slot. Similarly, Akinlotan (2018a), and Akinlotan and Housen (2017) found that administrative (67%), academic (51%), and media (56%) registers are likely to produce complex NPs when complex premodifier is present. It is also shown that

literary, student, and interactional registers are less likely to use premodifier, or where present, it is likely to be simple.

Jucker (1992) studied the use and structure of pre-head in British newspapers and found up-market newspapers demonstrating different structural patterns to that of down-market newspapers, which, unlike up-market newspapers, exhibit a high proportion of nouns and names in the pre-head position. Jucker's findings, together with the distinction of up-market and low-market media language, further show how register can provide significant insights into structural pattern and other similar predictors such as social status, proficiency, etc. This strong ability of register to shed light on social context informs our inclusion of the formality of text, which is derived from a re-classification of the texts under study. Following these findings, it is thus expected, among many others, that academic texts will produce more complex premodifiers than other texts do. Also, Biber et al.'s (1999, 578) finding that the use of premodifier and post-modifier is about equally common in media texts will be tested out.

2.3 Post-dependent syntactic weight

The number of structural nodes or elements that constitute a phrase or clause determines how complex/simple the realised structure will emerge. Previous research has shown that heavier constituent/element/node is usually positioned towards the end/right (Hawkins 1994; Wasow 2002; Bresnan et al. 2007). This end-weight hypothesis is attested to by the fact that complement and postmodifier, which are potentially the most complex constituents in the NP structure, are syntactically found on the right end in an NP, just after a head noun. (See Huddleston and Pullum's (2002) NP framework detailing the syntactic position of determiner, modifier, head noun, complement, post-modifier). The weight of these two constituents is described here as post-dependent weight and is interpreted as influencing the structural complexity/simplicity of the premodifier within an NP. Therefore, it is expected that if these two potentially heaviest constituents are realised as complex, then the premodifier is likely to be simple, and vice versa. Hence the weight/complexity of complement and/or postmodifier is expected to influence the complexity/simplicity of the premodifier.

In other words, interpreting the constraint of heaviness within the structural simplification hypothesis in New Englishes would suggest that the presence of a complex premodifier will necessitate a simple postmodifier, or vice versa. Similar predictions are suggested in the findings of Berlage (2014), Schilk and Schaub (2016) and Akinlotan and Housen (2017). It is Berlage who specifically showed the stronger influence of post-modifier over premodifier on the overall structural complexity of an NP. In the light of many expectations, it is expected that the absence of a premodifier or a preferential pattern of one-word (M1) premodifier

will associate with the presence of a heavy post-dependent. In other words, when the post-dependent slot of the NP consists of a complement and a postmodifier (CP) at the same time, it is expected that the premodifier slot will be empty or filled up with a one-word premodifier.

3. Data selection and preliminary analyses

The NPs are extracted from the *International Corpus of English* (*ICE*), and thus annotated as either having premodifier or not. The premodified NPs, that is, NPs consisting of premodifier, are further annotated into types (M1 having one-word premodifier, M2 having two-word premodifier, M3+ having three- or more-word premodifier). The data/annotation procedure is an extension of Akinlotan and Housen (2017), which has also been revised in Akinlotan (2018a). AntCon (Anthony 2014), together with manual intervention, is used in the extraction process. The manual intervention dealt with the correction of erroneous POS tags, parsing, assignment of grammatical functions, and peculiarities associated with the Nigerian variety. The NPs are extracted from the nine textual categories in the Nigerian component, and these categories are recategorised in order to ensure coherence. For instance, collapsing editorial and press reportage into one category named 'media' allows for a coherent comparison with the 'academic' category, which collapses different academic subtypes. The reconceptualisation of these nine text types into five genres/registers, which follows from Akinlotan and Housen (2017), is presented in Table 1 below.

Table 1. Reconceptualization procedure of 10 text types into 5 genres

GENRES IN THIS STUDY	TEXT TYPES IN NIGERIAN – *ICE*	
STUDENT	Exams	Student essays
MEDIA	Editorial	Press reportage
ACADEMIC	Academic	Popular humanities
ADMINISTRATIVE	Business letter	Administrative letters
INTERACTIONAL	Social letters	Skills & hobbies

As mentioned earlier, the extraction procedure follows the procedure in Akinlotan (2018a) and Akinlotan and Housen (2017). In this work, the extracted NPs used are NPs replaceable in their syntactic positions by a noun or a pronoun. Co-joined NPs (Biber et al. 1999), such as *governors and legislators* in *the newly elected governors and legislators* are taken as two constructions: (1) *the newly elected governors* and (2) *the newly elected legislators*. Nominalised adjectives (Biber et al. 1999; Faragher et al. 2012), such as *the American*, *the needy, the rich*,

are also extracted. Pronouns and NPs within the nominal clauses, including those embedded in a larger NP, are extracted as well. In the clause *That Mr Mohammed Buhari was elected President was a divine intervention*, three NPs, namely *Mr Mohammed Buhari*, *President,* and *a divine intervention*, were extracted. In order to carry out a direct comparison, NPs from the Ghanaian and British varieties of English are also extracted and analysed accordingly. Since many previous works have mainly compared media and academic text types, then our benchmark data from the Ghanaian and British varieties are limited to media (news reports) and academic (academic humanities) texts. In order to use the most recent samples from these two varieties, samples were taken from BYU (*Glowbe*) corpora, rather than *ICE*. A total of 6665 NPs, of which 4305 NPs (2282 premodified NPs, 2023 non-premodified NPs) emerged from the Nigerian variety. A total of 1159 and 1201 premodified NPs represent the Ghanaian and British varieties respectively. The extracted NPs are then categorised into premodified NPs (NPs consisting of premodifier of any structure) or un-premodified NPs (no premodifier). The 2282 premodified NPs are then further classified into three categories of structure. The structure of the premodification is measured by word length, and categorised as M1 (one-word premodifier, e.g. *corrupt* in *corrupt politicians*), M2 (two-word premodifier, e.g. *junior secondary* in *junior secondary school*), M3+ (three- or more-word premodifier, e.g. *rude educated young* in *rude educated young people*). Determiners, which sometimes can behave like premodifiers, are not conceptualised as premodifiers, except where they are intended to perform as premodifiers.

Coordinated premodifiers (e.g. the *beautiful* and *young* lady) are split, thus we have *beautiful lady* and *young lady.* This means that rather than take *beautiful and young* as M2 (consisting of two-word premodification), they are taken as two independent M1s (containing one-word premodification, e.g. (1) *beautiful lady* and (2) *young lady*). The premodifiers are further analysed for their form. For example, the premodifier in *The Arsenal fans* is the proper noun *Arsenal*, while the attributive adjective occupies the same position as in *The beautiful artwork*. In *the frustrated fans*, the participial -ed *frustrated* is used, while a combination of proper noun+participial -ing is found in *The annoying Liverpool goalkeeper*. For every NP the text which produces it is identified (see the textual recategorization above). The formality of text is operationalized by classifying media, academic, and literary texts as formal, and student and interactional texts as informal. Animacy of the head noun is operationalized as animate or inanimate. The operationalisation of definiteness and indefiniteness means that definiteness includes functions of specificity (e.g., *I do not have the book you asked for*), genericity (e.g. *The Nigerians in London are Yorubas*), and proper nouns (e.g. *Obasanjo* and *Nigeria* in *Obasanjo was one of the poor leaders Nigeria has served*). Meanwhile, indefiniteness refers to the use of the indefinite articles *a* and/or *an* (for example, *We need a good leader in this country Nigeria*). In

three Chinese students, the presence of definiteness is manifested by the use of the cardinal *three*. On the other hand, there is absence of definiteness in the NP *past Nigerian Head of State*. Syntactic function is annotated by identifying the following eight syntactic positions of every NP extracted. In Table 2, examples illustrating NPs in these syntactic positions are provided.

Table 2. Syntactic positions and corresponding NPs within the clause structure

Syntactic position	NPs within the clause structure
1. Subject	*The National Assembly shall* have power to make laws
2. Subject complement	Drying of food crops is *an energy intensive operation*
3. Apposition	The big three languages, *Hausa, Igbo and Yoruba,* dominate other minority languages in Nigeria
4. Direct object	Government parastatals lavish *huge sums of money* yearly
5. Indirect object	Experts are invited to *them* the many ways of doing business
6. Object complement	The Minister of Information called Boko Haram *a disease*
7. Preposition complement	Women with *mature skin* are as beautiful as the dewy youth
8. Adverbial	James Ibori was sentenced to imprisonment *last Monday*

The post-dependent weight in the study is operationalized by two means: (1) identifying the presence or absence of a post-dependent syntactic element, and (2) where a post-dependent element is present, categorizing the structural type accordingly.

Four structural types of post-dependent are identified. The first type is NPs containing (1) complement+post modifier (CP post-dependent). For example, *the Head of the State of the last administration* contains the prepositional phrase complement *of the state* and the prepositional phrase post-modifier *of the last administration*. Next is (2), which is complement alone (C post-dependent). In this C-post-dependent, the post-modifier *of the last administration* will be omitted, resulting in *the Head of the State*. The third type is post modifier alone (P post-dependent). In this P-post-dependent type, the complement *of the state* is absent whereas the post-modifier PP *of the last administration* is present. The fourth is zero post dependent element (Z post-dependent). In this Z-post-dependent, neither a complement nor a post-modifier is present. The distinction between post modifier and complement is based on Huddleston and Pullum's (2002) noun phrase framework. It is important to note that while Huddleston and Pullum (2002) distinguished between post-modifier and peripheral dependent (PD) in the post-dependent slot, the present study does not follow such conceptualization, so peripheral dependent is collapsed into the post-modifier slot. Given that PD performs the same func-

tion as the post modifier in the task of providing extra information relating to the head noun, then such a separate syntactic slot becomes a double-analysis because one phenomenon (extra-information) is twice accounted for. Having completed the coding, the independent effects of each variable and the emergent patterns of structural distributions are analysed using the statistical methods of cross tabulation and chi square test. Cramer's V is also used to measure the extent of association between the independent and dependent variables. Cramer's values can range from 0 to 1. The value of 0 suggests that there is no association, while the value of 1 suggests that there is complete association, which can only be possible when the independent and dependent variables are equal. In other words, only the results of the independent behavior of the variables are presented in the present study.

4. Results

In this section, reports of the occurrence/non-occurrence, the structural pattern, and forms of the used premodifier as well as variables representing register, function, post-dependent structural type, and grammatical (in)definiteness are presented. Each distribution is then followed by a chi square test of independence and Cramer's V showing what kind of relationship exists between the structural pattern and the predictors.

Table 3. Register and occurrence of premodifier

Text types	Premodification		No-premodification		Total	
	n	%	n	%	n	%
Academic	632	51	437	49	1069	100
Media	429	63	257	37	686	100
Student	409	50	401	50	810	100
Administrative	405	45	487	56	892	100
Interactional	407	48	441	52	848	100
Total	2282	53	2023	47	4305	100

As can be seen in Table 3, there is strong evidence that there is a relationship between register and the use of premodifier in the NP structure {χ^2 (4) =72. p<.0001}. It can be seen that the use of premodifier is distributed in the same way across the different text types. The Cramer's V is calculated to find out the extent of association between register and frequency of premodification. Hence, the Cramer's V of .13 shows that there is a strong positive relationship between text types and occurrence/use of premodifiers. In other words, the use of premodifier is more likely to occur in certain register than in other text types.

This connection is clearly exemplified in the media register, which shows some relative preferences for the use of premodifier (63% versus 37%). On the other hand, there is no clear preference for premodified or un-premodified NPs in student register. This fuzzy connection in student register is very much like the pattern found in academic register (for instance, see 50% versus 51% for preference of premodification, and 49% versus 50% for no-premodification). Given the different dimensions that register as a variable can offer, it might be helpful to examine how the distributions above shed light on the relationship between the formality of text and the presence/absence of premodifier with the NP structure. As previous studies have shown NPs as a marker of style which relates NP structures with text type, for instance, simple NP structure is related with literary text, while complex NP structure is related with academic or media text (Biber et al. 1999; Meunier 2000), then on the basis of the formality of text the subsequent analysis tests out the extent to which such relationship is present in the variety under study. Having shown the relationship between register and the use of premodifier, the relationship between syntactic function and the use of premodifier is now presented in the following table.

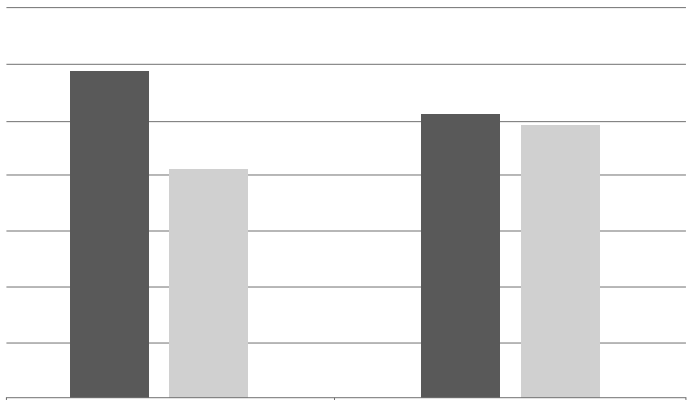
Table 4. Syntactic functions and occurrence of premodifier

Syntactic functions	Premodification		Non-premodification		Total	
	n	%	n	%	n	%
Subject	566	59	393	41	959	100
Adverbial	42	32	89	68	131	100
Direct object	252	33	517	67	769	100
Indirect object	37	43	49	57	86	100
Object complement	26	43	34	57	60	100
Preposition complement	961	61	616	39	1577	100
Subject complement	335	57	257	43	592	100
Apposition	63	48	68	52	131	100
Total	2282	53	2023	47	4305	100

Following the strong effect of syntactic function on NP complexity in Nigerian English noun phrase in Akinlotan and Housen (2017), it is thus important to find out whether or not a similar effect is found here. Also, it will be shown to what extent this effect impacts on the occurrence and non-occurrence of premodifiers within the NP structure. Our chi square test of independence shows that there is indeed a strong relationship between presence/absence of premodifier within the NP structure and the syntactic functions that the actual NP bearing the premodifier performs within the clause structure, {61% versus 68% and 67%, χ^2 (7) =

213.3. p<.0000}. It can be seen that NPs found in the syntactic positions such as adverbial and direct object are more unlikely to have premodifier in them than otherwise, while NPs in syntactic positions such as preposition complement and subject (61% and 59% respectively) are more likely to consists of a premodifier.

Schilk and Schaub (2016) have shown that a binary resolution of the syntactic function (that is, subject and non-subject NPs) offers another insightful dimension of the effects that syntactic function exhibits on the internal structure of NP, which implies that the relationships found in our data may not necessarily exist should the detailed syntactic functions be collapsed into a two-way distribution. Hence replicating Schilk and Schaub's (2016) binary syntactic method implies that the eight syntactic functions identified can be collapsed into a two-way syntactic function model (i.e. Subject NPs and Non-subject NPs) with a view to showing the effect that detailed syntactic functions have on the predictability of occurrence of premodification in the variety under study, and possibly in other similar new varieties. Figure 1 shows an apt difference in preference for occurrence of premodification between Subject NPs and Non-Subject NPs.



	Subject NPs	Non-subject NPs
Premodification	59	51
Non-premodification	41	49

Fig. 1. Binary syntactic position and occurrence of premodifier in NPs

As can be observed, a comparison of Figure 1 and Table 4 offers a new perspective, namely the disappearance of a number of important and strong structural patterns. For instance, the strong preference for the use of premodifier within an NP functioning as the preposition complement position is no longer found. On the other hand, the strong preference for the absence of a premodifier within an NP functioning as adverbial and direct object position is also no longer the case. Furthermore, certain structural patterns become almost non-existent. For instance, the distributional differences between subject NPs being likely to consists

of a premodifier and non-subject NPs being likely to omit a premodifier become smaller in 18% and 3% respectively. Nevertheless, as with detailed syntactic functions, Figure 1 reiterates the structural pattern in which a premodifier is likely to occur irrespective of the syntactic positions of the NPs (59% and 51% for occurrence of premodification against 41% and 49% for non-occurrence of premodification). Also, a chi square test of this two-way distribution shows that there is no relationship between syntactic position (of a two-way method) and the occurrence/use of a premodifier {χ^2 (1) = 0.99. p<.32}. This lack of association is further attested by Cramer's V of 0.08. In other words, the occurrence of a premodifier within an NP structure cannot be explained in terms of two syntactic positions of NPs being at the subject or at the non-subject position in a clause structure. This finding does not only improve on Schilk and Schaub's (2016) method and findings and corroborate Akinlotan (2017) and Akinlotan and Housen (2017) but also suggests that occurrence/use/presence of premodifiers in NPs in our variety is well linked to even more than eight syntactic positions identified in the present study.

Table 5. Post-dependent syntactic weight and occurrence of premodifier

Types of post-dependent weight	Premodification		Non-premodification		Total	
	n	%	n	%	n	%
Post-modifier	49	16	261	84	310	100
Complement	681	37	1146	63	1827	100
CP (complement+ postmodifier)	277	48	305	52	582	100
No complement, no postmodifier	1275	80	311	20	1586	100
Total	2282	53	2023	47	4305	100

As can be seen, there is strong evidence of a relationship between the structural type in the post-dependent slot and the occurrence of premodifier {χ^2 (3) =838.1. p<.0001}. A Cramer's V of 0.4 shows that there is a positive relationship between syntactic constituent present in the post-dependent and occurrence/use of a premodifier. This implies that when an NP consists of an empty post-dependent slot (i.e. no syntactic constituent in the post-dependent syntactic slot, i.e. no complement or post modifier is present in the NP), there is more likelihood that such an NP will have a premodifier (80% versus 20% respectively). This nicely illustrates the structural simplification hypothesis (Görlach 1998; Schilk and Schaub 2016; Akinlotan and Housen 2017). Relatedly, it can be observed that the presence of a post modifier in the post-dependent slot attracts a greater number of NPs with no premodifier (84%) than NPs with premodifier. A similar pattern is observed

when a complement is found in the post-dependent slot. It can be seen that the presence of a complement in the post-dependent slot is likely to produce NPs without premodifier, and vice versa (63% versus 37% respectively). This finding somehow supports the findings in Akinlotan and Housen (2017), showing the simplification and complexification process in the NP structure in the Nigerian variety of English, and perhaps in other similar outer circle varieties. Following the previous findings in Berlage (2014), Schilk and Schaub (2016) and Akinlotan and Housen (2017), one main expectation is that NPs in the Nigerian variety will very much likely have no premodifier when there is a combination of a complement and a post-modifier in the post-dependent slot at the same time. Although this is the case at a percentage difference of 4%, this is not enough to corroborate similar findings in Schilk and Schaub (2016) and Akinlotan (2018b).

5. Results: structural pattern of occurring premodifier

Having presented the contexts where we are likely to find NPs with or without premodifier, the following sections will now present the contexts and distribution of the structural type of the premodifiers found in the corpus. For easy comprehension, the weight of premodifier is classified as: M0 (non-occurrence), M1 as a one-word premodifier, M2 as a two-word premodifier, and M3+ as a premodifier consisting of three words and more. In addition to the structural type, the distribution will also show the word form of M1 premodifier, as well as the combinatory pattern of M2 premodifiers. The distributions in the media and academic texts from the Ghanaian and British varieties will be presented first.

Table 6. Premodifier structure by register in Ghanaian (GHA) and British (BR) varieties

Text type (Ghanaian English)	M1		M2		M3+		Total	
	n	%	n	%	n	%	n	%
Media-GHA	188	42	155	35	103	23	446	100
Academic-GHA	428	60	245	34	40	6	713	100
TOTAL	616	53	400	35	143	12	1159	100

Text type (British English)	M1		M2		M3+		Total	
	n	%	n	%	n	%	n	%
Media-BR	157	34	175	38	132	28	464	100
Academic-BR	548	74	172	23	1	2	737	100
TOTAL	705	59	347	29	149	12	1201	100

Table 7. Premodifier structure by syntactic function in Ghanaian (GHA) and British (BR) varieties

Syntactic function (Ghanaian English)	M1		M2		M3+		Total	
	n	%	n	%	n	%	n	%
SUBJECT-GHA	109	39	104	38	61	22	276	100
NON-SUBJ.-GHA	507	57	296	33	82	9	889	100
TOTAL	616	53	400	35	143	12	1159	100

Syntactic function (British English)	M1		M2		M3+		Total	
	n	%	n	%	n	%	n	%
NON-SUBJ.-BR	493	57	278	32	91	11	862	100
SUBJECT-BR	212	63	69	20	58	17	339	100
TOTAL	705	59	347	29	149	12	1201	100

The above distributions from the Ghanaian and British varieties show some patterns, which will be compared to the patterns from the Nigerian variety. In the following paragraphs, the results from the Nigerian variety are presented.

Table 8. Distribution of premodifier structures and the predictors

Variables	M1		M2		M3+		Total	
	n	%	n	%	n	%	n	%
REGISTER								
Academic	491	78	119	19	19	3	629	100
Media	317	71	94	21	37	8	448	100
Student	341	85	51	13	7	2	399	100
Administrative	341	85	54	13	5	1	400	100
Interactional	352	87	52	13	2	0	406	100
FORMALITY								
Formal	1149	78	267	18	61	4	1477	100
Informal	693	86	103	13	9	1	805	100
SYNTACTIC FUNCTIONS								
Subject	301	77	73	19	16	4	390	100
Adverbial	44	76	14	24	0	0	58	100
Direct object	404	80	95	19	8	1	507	100
Indirect object	12	50	12	50	0	0	24	100

Object complement	9	45	11	55	0	0	20	100
Preposition complement	837	85	107	11	38	4	982	100
Subject complement	163	77	44	21	5	2	212	100
Apposition	72	81	14	16	3	3	89	100
DEFINITENESS								
Definiteness	809	80	151	15	46	5	1006	100
Indefiniteness	1033	81	219	17	24	2	1276	100
POST-DEPENDENT WEIGHT								
Post modifier	21	40	32	60	0	0	53	100
Complement	437	79	94	17	22	4	553	100
Complement+post modifier	86	77	26	23	0	0	112	100
Empty	1298	83	218	14	48	3	1564	100

5.1. Register and premodifier structure

Evidence of the influence of the register on structural variation exists in the literature (Jucker 1992; Biber et al. 1999; Schilk and Schaub 2016), although the syntactic function variable has been shown to outweigh it (Akinlotan and Housen 2017). As can be observed in Table 8, there is a weak relationship between register and structural type of premodifier in our corpus {χ^2 (8) =81.42. p<.0001}. This lack of strong predictability of the structure of premodifier on the basis of register is further attested by a Cramer's V of 0.13. In other words, there is no particular trend in which all of the three structural types can be explained. Furthermore, as can be seen in Table 8, M1 structural type is the preferred structural pattern, irrespective of the register that produces the NPs (consider the percentages 78%, 71%, 85%, 85%, and 87% respectively). In the same way, M2 is the next preferred structure, which, like M1, is not related to register. This means that M2 is the next preferred choice irrespective of register/text type that produces the NPs exhibiting the premodifiers. The wide gap in the percentage differences between M1 and M2 shows that M1 is almost always going to be the most preferred structure of premodifier in the Nigerian variety of English. On the other hand, M3, in the light of M1 distributional differences, is almost always going to be absent within the NP structure in the variety.

5.2. Syntactic functions and premodifier structure

As can be seen in Table 8, syntactic functions offer a much better explanation of the occurrence/use of premodifier structural type than either register or formality of text does. There is evidence of a relationship between syntactic function and premodifier structure {χ^2 (14) =81.3. p<.0000}. Unlike register and formality of text, syntactic functions inform us of when and where we might find M2 more likely to occur than M1. For instance, when the NP functions as an object complement, M2 premodifier is likely to occur. Similarly, when the NP functions as an indirect object, M2 premodifier is just as likely as M1 to be realised. Furthermore, when NPs function as adverbial, direct object, and object complement, M3+premodifier structural type is a knock out, almost always not likely to occur within these three categories of NPs. Although the overall preferred structural pattern remains M1, syntactic function appears to account for more contexts of variability than register has shown so far.

5.3. Post-dependent weight and premodifier structure

From the foregoing, it has been shown that the weight in the post-dependent slot of an NP can impact on the occurrence or non-occurrence of a premodifier within an NP structure. It is also found out that when the post-dependent slot is empty, premodification is very likely to occur (80% versus 20% respectively). As Table 8 shows, there is a small but weak relationship between syntactic structure in the post-dependent slot and the structure of the premodifier {χ^2 (6) =91.4 p<.0001}, which is attested by Cramer's V score of 0.14. When post modifier is present in the post-dependent slot, M2 premodifier is more likely to occur than M1 (60% versus 40%). Also worthy of note is that the presence of a post-modifier in the post-dependent slot is likely to prevent the use of M3+ or longer structure of premodifier. Similarly, when a complement and a post-modifier occur in the post-dependent slot at the same time, M3 or a longer structure is unlikely to occur (0%). In other words, and as shown in Table 8, M3 or a longer structure is likely to occur when there is only a complement or an empty post-dependent slot (4% and 3% respectively). Furthermore, M1 is more likely to occur where there is no complement or post-modifier (80%) than when there is a post-modifier (40%).

6. Syntactic category and form of M1 premodifier

Following the assertion that that single (M1) premodifiers are more common than others, and given that this is also the case in our corpus data, the formal distribution of the syntactic category of M1 premodifiers will be presented in the next

sub-sections, showing the extent to which this is true of our corpus data. First, an overview of the distribution of choices between noun, adjective, and adverb is presented in Table 9. This is then followed by the results of M1 premodifier noun type and the variables representing register, animacy, and syntactic function. Lastly, the distribution of the M1 premodifier adjectival type is presented.

6.1. Register and M1 premodifier word choice

Biber et al. (2007) have shown that there exists a positive relationship between register and syntactic category of one-word premodifier. As can be seen in Table 9, there is weak evidence for the relationship between register and syntactic category of M1 premodifier in our corpus data {χ^2 (8) =35.67. p<.0001}.

Table 9. Overview of M1 premodifier word choice in the context of register

Register	Noun		Adjective		Adverb		Total	
	n	%	n	%	n	%	n	%
Academic	108	22	376	77	7	1	491	100
Interactional	114	36	202	64	1	0	317	100
Student	92	27	249	73	0	0	341	100
Media	105	31	227	67	9	3	341	100
Administrative	112	32	232	66	8	2	352	100
Total	531	29	1286	70	25	1	1842	100

The relationship is very weak based on a Cramer's V result, which stands at 0.09. Also, this weak relationship is evident in the sense that adjectival premodifier is the most preferred choice across the five registers studied herein. Corroborating Biber et al. (2007), unsurprisingly, adjectival premodifier is preferred to noun and to adverb premodifier irrespective of the text type that produces them. Expectedly, it can be seen that adverb is the most likely choice not to occur in interactional and student text types.

6.2. M1 premodifier noun type

As Table 9 shows, it can be seen that M1 premodifier of noun and adjectival word choices account for 99% of the distribution. In Table 10, a further analysis into these two choices is undertaken and presented. In Table 10, the distributions of M1 noun premodifier in relation to the variables of animacy, register, and syntactic function are presented. The presentation of the distribution is followed

by the results of the chi square and Cramer's V, which provide insights into interpretations and analyses.

Table 10. Distribution of M1 premodifier and noun type in relation to the tested predictors

Variables	Proper noun		Common noun		Total	
	n	%	n	%	n	%
ANIMACY						
Animate head noun	92	42	129	58	221	100
Inanimate head noun	66	21	244	79	310	100
REGISTER						
Academic	57	39	91	61	148	100
Interactional	16	21	62	79	78	100
Student	17	28	44	72	61	100
Media	52	27	142	73	194	100
Administrative	26	52	24	48	50	100
SYNTACTIC FUNCTIONS						
Subject	29	28	79	72	110	100
Adverbial	0	0	17	100	19	100
Direct object	34	37	64	63	102	100
Indirect object	0	0	16	100	17	100
Object complement	0	0	18	100	19	100
Preposition complement	71	39	116	61	191	100
Subject complement	17	40	30	60	50	100
Apposition	21	52	19	48	40	100

6.2.1. Animacy and M1 premodifier noun type

Animacy has been shown to influence genitive variation and can be operationalised in different ways. The animacy of the head noun in the NP is determined by revising the coding criteria of Zaenen et al. (2004) into a binary method consisting of head noun in NPs being identified as either human or non-human. Only humans, that is living beings and not animals, are categorised as humans, while all other items including names of organisations, locations, animals, and companies are classified as non-human. As Table 10 shows, there is strong evidence showing the relationship between the animacy of the head noun and the syntactic form of the M1 noun premodifier {χ^2 (1) =24.6. p<.0.0001}, which is attested to by

a Cramer's V of 0.22, showing that the relationship is moderate. More specifically, it can be observed that an inanimate head noun in an NP is more likely to attract a common noun premodifier (79%) than a proper noun premodifier (21%).

6.2.2. Register and M1 premodifier noun type

Still considering the argument for register as a very strong predictor of structural variation (Biber et al. 1999), the relative strength of register influencing structural variation is again reflected in Table 10. The observed strength of register as a predictor in the table shows that, in our corpus, register and form of M1 noun premodifier are related {χ^2 (4) =19.78. p<.0.0006}. A Cramer's V result of 0.19 shows the relationship to be a moderate one, in which the power of register explaining the distribution of M1 noun premodifier can be highly insightful. Except for the administrative text type, in which a proper noun is preferred to a common noun as an M1 noun premodifier, all the other text types exhibit opposite patterns, in which a common noun is preferred to a proper noun as an M1 noun premodifier. Nevertheless, the academic text type is observed to associate more with proper noun M1 premodifier (39%) than any of the other text types: interactional (21%), student (28%), and media (27%).

6.2.3. Syntactic functions and M1 premodifier noun type

As with Table 10, the detailed syntactic functions undertaken in this study offer more specific statements about the relationship between the syntactic function that an NP performs within a clause structure and the form of a single premodifier. As can be seen in Table 10, there is strong evidence showing a relationship between the syntactic functions and the form of a single premodifier {χ^2 (7) =36.53 p<.0.0000}. The occurrence of common nouns is limited to adverb, object and preposition complement NPs (100% versus 0%), whereas apposition NPs are more likely to produce or occur with an M1 proper noun premodifier (52%). Furthermore, subject NPs are more likely to realise common nouns (7%) than proper nouns (28%) as single premodifiers.

6.3. M1 premodifier adjectival type

The distribution of M1 premodifier adjectival type in relation to the variables representing animacy, register, and syntactic function is presented here. Table 11 shows the frequency and percentages of the adjectival premodifier type consisting of participial *-ing,* participial *-ed* and attributive.

Table 11. Distribution of M1 premodifier adjectival type and the tested variables

Variables	Participial *-ing*		Participial *-ed*		Attributive n %		Total	
	n	%	n	%	n	%	n	%
ANIMACY								
Animate head noun	11	6	24	11	231	83	266	100
Inanimate head noun	138	17	219	21	663	62	1020	100
REGISTER								
Academic	23	6	23	6	327	88	373	100
Interactional	19	9	42	19	156	72	217	100
Student	17	7	19	8	212	85	248	100
Media	18	8	15	7	183	85	216	100
Administrative	18	7	42	18	172	75	232	100
SYNTACTIC FUNCTIONS								
Subject	9	3	11	4	250	93	270	100
Adverbial	0	0	7	27	19	73	26	100
Direct object	9	4	8	4	201	92	218	100
Indirect object	0	0	0	0	5	100	5	100
Object complement	0	0	0	0	3	100	3	100
Preposition complement	13	2	9	1	594	97	616	100
Subject complement	3	3	3	3	99	94	105	100
Apposition	2	5	9	2	32	93	43	100

6.3.1. Animacy and M1 premodifier adjectival type

Following the coding criteria stated earlier, the correlation between the animacy of the head noun and the form of M1 adjectival premodifier is sought. As Table 11 shows, the animacy of the head noun and the form of the M1 adjectival premodifier are related {χ^2 (2) =47.85. p<.0.0001}, with a Cramer's V of 0.19 showing a small but meaningful degree of relationship. For instance, an inanimate head noun associates more with a participial single premodifier than an animate head noun does with a participial single premodifier (17% versus 6%). However, such relationship is not found in the use of an attributive single premodifier. Furthermore, an animate head noun is more likely to attract an attributive single premodifier (83%) than an inanimate head noun would do (62%). Also, a similar behavior can be observed between the animacy of the head noun and the use of the participial *-ed* in that an inanimate head noun is more likely to attract the participial *-ed*

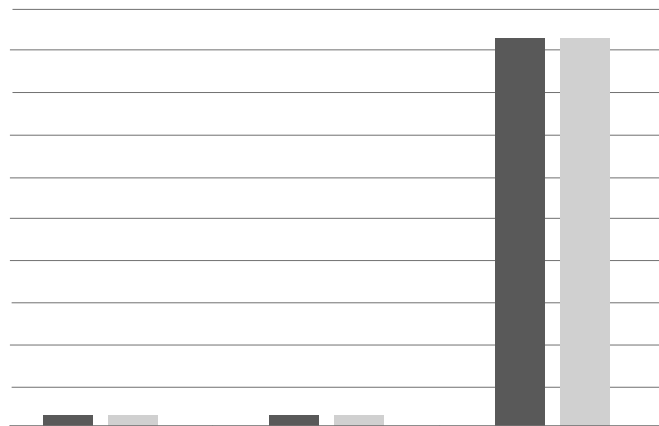
than an animate head noun would do (21% versus 11%).

6.3.2. Register and M1 premodifier adjectival type

Just as it is found in the animacy of the head noun and the form of M1 adjectival premodifier, the relationship between register and the form of M1 adjectival premodifier is small but significant {χ^2 (8) =46.39. p<.0001} and is attested to by a low Cramer's V of 0.13. This implies that the choice of M1 premodifier is almost restricted to the attributive. Next to this choice is the use of the participial *-ed* and the least choice is the participial *-ing*. As the table further shows, the administrative and interactional text types are more likely than any other registers to choose the participial *-ed* over the participial *-ing*. However, the media and academic registers show a similar behavior in that these text types are not likely to produce M1 participial *-ed* .

6.3.3. Syntactic functions and M1 premodifier adjectival type

As can be seen in Table 11, the syntactic function that an NP performs and the form of the M1 premodifier appear to be related, as indirect object and object complement NPs are exclusively limited to attributive adjective (100% versus 0%). A chi square test of independence could not be performed on the distribution since



	participial *-ing*	participial *-ed*	attributive
Premodification	3	4	93
Non-premodification	3	4	93

Fig. 2. Binary syntactic function and single premodifier form

more than 25% of the observed frequencies is less than 5. Therefore, I collapse the resolution into the binary resolution of subject NPs versus non-subject NPs. The effect emanating from this binary resolution is thus presented in Figure 2. As Figure 2 suggests, there is no relationship between syntactic position and single premodifier. In other words, the same preferential pattern emerges when NPs are at subject or at non-subject positions in a clause structure.

6.4. Combinatory pattern of M2 premodifier

In Table 12, the distribution of the combinatory pattern of M2 premodifier is shown. Although weak influence of register is found on M1, none is found on M2 combinatory patterns {χ^2 (16) =20.1. p< 0.1899}. A Cramer's V of 0.12 further shows that there is a negative relationship between register and M2 combinations. A (adjective)+A (adjective) is the most likely combination to occur, irrespective of the register that produces the NPs. Another combinatory pattern to the above is A (adjective)+N (noun), although the trend, as can be seen in Table 12, is not largely different from N (noun)+N (noun), except in the media (10% versus 21%) and interactional (23% versus 12%) text types. Similarly, preference for the N (noun)+A (adjective) combination is more likely to occur in the academic (10%) and media (13%) text types than in the administrative (4%), student (6%), and interactional (4%) text types. In the same vein, the Adv (adverb)+A (adjective) combination is almost always not going to be expected in the administrative, student, and interactional texts types, given their manifestation of high simplification asserted in Akinlotan (2016) and Lamidi (2007).

Table 12. Register by combinatory pattern of M2 premodifier

Text type	N+N		A+A		A+N		N+A		Adv+A		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Academic	21	18	63	53	18	15	12	10	5	4	119	100
Media	9	10	51	54	20	21	12	13	2	2	94	100
Administrative	6	12	32	63	11	22	2	4	0	0	51	100
Student	8	15	33	61	10	19	3	6	0	0	54	100
Interactional	12	23	32	62	6	12	2	4	0	0	52	100
Total	56	15	211	57	65	18	31	8	7	2	370	100

7. Conclusion

The present paper has shown that premodifier is more likely to appear (53%) than not (47%) within the structure of an NP in the Nigerian variety of English, and by extension reflects that the structural simplification hypothesis is highly present in the variety under study (Görlach 1998; Akinlotan and Housen 2017). The findings also show that the phenomenon of the presence and/or absence of premodifiers is highly predictable based on the variables tested in the study. As Tables 10, 11, and 12 show, all the variables tested have impact on the occurrence and non-occurrence of premodifier, though such impact varies from one variable to another. For instance, variables representing post-dependent weight and syntactic function emerged as the most potent predictors of the occurrence/non-occurrence of premodifiers.

On the other hand, the paper also observes that, in predicting the presence/absence of premodifier with the Nigerian NP structure, the variable representing register asserts lesser influence than post-dependent weight and syntactic function do. Next to register in terms of predictive strength are variables representing the formality of text and definiteness, which emerged with the least influence. This finding reinforces the idea that there is a relationship between the predictive strengths of the variables and the context of prediction (Tagliamonte and Baayen 2012; Akinlotan 2017).

In order to have a clearer picture of the predictive strengths of each variable studied, Tables 13–15 sum up the scenarios found in the three issues investigated in this paper. The determinants are ordered based on their observed relative influences derived from the percentage differences that are provided in brackets. In terms of register asserting varying degree of influence, the student text type shows no influence, as choices are equally divided, resulting in a nil (0) percentage difference. For instance, preposition complement NPs are more likely to contain premodifiers (61%) than not (39%). The percentage difference is thus 22%. Following the same method, a percentage difference of 36% is found for adverbial NPs. In addition, one can observe different trends among the distributions in other syntactic functions, which suggests that there is a strong relationship between syntactic function and premodifier constructional choices. Such patterning relationship further attests to the fact that the structure of NP in new varieties of English is dependent on a number of internal and external variables (Berlage 2014; Brunner 2014; Schilk and Schaub 2016).

As Table 13 shows, the paper found that premodifier structure in the variety under study is likely to follow a certain structural pattern. In other words, the occurrence of premodifier is likely to follow this structural pattern: M1 (81%), M2 (16%) and M3+ (3%), where M1, M2, and M3+ respectively refer to a one-word, two-word, and three-and-more word structure of premodifier. This finding clearly manifests the simplification hypothesis (Babalola 2010; Schilk and Schaub

2016; Akinlotan 2016) in our datasets. The findings further show that the structural pattern is predictable based on the variables tested, and that the premodifiers in Nigerian English noun phrase are highly likely to be one-word structures (see 81% for M1 structure). Three-word and longer structures are very rare, just as two-word structures are very scanty. If M1 is conceptualized as simple-structure premodifier, and M2 and M3+ as complex premodifiers, then a clearer pattern emerges for the structural pattern of premodifier in our variety. With such interpretation, it will emerge that NP structure in Nigerian English is more likely to realise simple-structured premodifiers (81%) than complex-structured premodifiers.

As Table 13 shows, the tendency is for premodifier to be simple-structured, and all of the variables tested have impact on the structure of premodifier, though in varying degree. Syntactic function, together with syntactic weight in the post-dependent slot of the NP, is the predictor that better explains the variation of the structure of premodifier. For instance, it is shown that complex premodifiers, rather than simple premodifiers, are more likely to occur in object complement NPs. A similar pattern is also found in indirect object NPs.

In Tables 9, 10 and 11, one can further observe a negative relationship between some syntactic positions of the NPs and the structure of premodifier in them, which, again, shows the uncertain predictive strength of syntactic function (Schilk and Schaub 2016; Akinlotan 2017; Akinlotan and Housen 2017). For instance, adverbial, indirect object, and object complement NPs are not likely to realise three-word or longer structure premodifier. It is important to note that indirect object NPs are equally distributed between M1 and M2 premodifiers (50% versus 50%). Similarly, syntactic weight in the post-dependent slot competes nicely with syntactic functions. As we can see in Tables 13–15, when the post-dependent slot is occupied by a post-modifier, a complex premodifier is more likely to occur.

Meanwhile, it is important to note that no M3+ premodifier actually associates with the presence of post-modifier in the post-dependent slot. In other words, no M3+ premodifier is used when a post-modifier is present. A similar pattern (of no M3+ premodifier) is found when a complement and a post-modifier simultaneously occur in the post-dependent slot. It is rather unclear whether we can make a case for a significant presence of complexity in the premodifier structure of Nigerian English noun phrase on the basis of a preference for post-modifier+complex premodifier, when in reality M3+ is never used out of the 2282 observations. Furthermore, as Tables 9–11 show, register manifests almost no influence on that; irrespective of the register, one-word structural pattern is preferred. This predictive strength of register further confirms Biber's (2012) argument that register as a linguistic variable must be carefully designed and operationalized in order to become very useful in the studies of linguistic variation.

Relating to the syntactic category of M1 premodifier, the paper also observes (see for example Tables 11–13) a minimal influence of register on whether M1 premodifier is a noun, adjective, or adverb. Adjectival premodifier is the most

preferred choice, irrespective of the register that produces the NPs. Syntactic functions also assert small influence on M2 combinatory pattern, and on M1 form and noun type. Although register and syntactic function demonstrated similar minimal influence on the form of the premodifiers used, syntactic function can be identified as a better predictor because, in comparison, it offers more explanations than register does. In addition to syntactic function and register, animacy also asserts strong influence in predicting the syntactic category and form of M1 premodifier. Animacy, which has not been as extensively studied as a linguistic variable as syntactic functions and registers, shows that more identifying and analyzing unknown variables will not only provide insights and new perspectives on syntactic construction, but will also reveal certain peculiarities other variables could not reveal (Collins 2014; Akinlotan 2018a; Akinlotan 2018b).

In Tables 13 and 14, the predictors are arranged on the basis of the effects emanating from percentage differences which are provided in brackets. For example, definite NPs are likely to produce M1, M2, and M3+ premodifiers (80%, 15%, and 5% respectively). Given that M2 and M3+ can be conceptualized as complex premodifiers, then the structural pattern of the premodifier in the Nigerian variety of English, and perhaps in similar outer circle varieties, emerges as a simple-structured internal part of the noun phrase.

As can be seen, the difference in percentages between the simple-structured (see M1 with 80%) and the complex-structured (see the sum of M2 and M3+, which are 15% and 5% respectively) distributions is a huge figure of 60% (80%-20%). Such percentage difference shows the extent of preferential choices. Therefore, the positive (+) and negative (-) signs signify the direction of the association; + shows preference or association for a particular construction, while - shows non-preference. When there is no sign of -/+ (e.g., indirect object NPs), then this indicates absence of a preference. On the other hand, in Table 15, no percentage difference is given in brackets. As can be seen in the table, the most preferred choice is signified by the highest number of the + sign, while the least preferred choice is signified by the - sign. For instance, adjective is the most preferred choice in M1 syntactic category (++), followed by noun (+), and then the least preferred option is adverb, which therefore is signified by the negative sign (-).

Regarding combinatory patterning, A+A (adjective and adjective, for example *young* (an adjective) and *educated* (another adjective) in *many young educated Africans*) is the most preferred option in the interactional text type, and therefore attracts the highest number of positive signs (++++). The next preferred option is the noun and noun pattern (that is, N+N, for example *anger* (a noun) and *management* (another noun) in *anger management therapy*), which therefore attracts a lesser number of positive signs (+++). On the third rank is the adjective and noun combination (i.e. A + N, for example *sound* (an adjective) and *education* (a noun) in *sound education plan*), which attracts the least positive sign (++). The adverb+adjective pattern is not found in the corpus and is signified by the negative

sign (-). Given that the paper has only investigated each predictor independently, showing how each variable influences structural choices in each context, then a further study which examines the predictors simultaneously is desirable. Given that language internal and external variables interact to influence construction choices, then a multivariate regression analysis will show the extent to which, if any, the studied variables interact. Following the recurrent simplified patterning found in this study, the paper has not only corroborated, with new corpus evidence from the outer circle variety, the structural simplification hypothesis (Görlach 1998; Croft 2000; Brunner 2014; Akinlotan and Housen 2017; Akinlotan 2018a) but has also shown a manifestation of endonormative stabilisations which is essentially a minimal presence of syntactic complexity.

Table 13. Independent effect of the variables investigated in relation to occurrence of premodifier

Variables	Premodified NP	Un-premodified NP
SYNTACTIC FUNCTIONS		
Adverbial (36)	-	+
Direct object (34)	-	+
Preposition complement (22)	+	-
Indirect object (14)	-	+
Object complement (14)	-	+
Subject complement (14)	+	-
Apposition (04)	-	+
Subject (02)	+	-
REGISTER		
Media (26)	+	-
Administrative (11)	-	+
Interactional (04)	-	+
Academic (02)	+	-
Student (0)		
FORMALITY OF TEXT		
Formal (10)	+	-
Informal (02)	-	+
POST-DEPENDENT WEIGHT		
Post-modifier (68)	-	+
Empty post-dependent (60)	+	-
Complement (26)	-	+

Complement+post-modifier (4)	-	+
(IN)DEFINITENESS		
Indefiniteness (14)	+	-
Definiteness (0)		

Table 14. Independent effect of the variables investigated in relation to premodifier structures

Variables	Simple premodifier	Complex premodifier
SYNTACTIC FUNCTIONS		
Preposition complement (70)	+	-
Apposition (62)	+	-
Direct object (60)	+	-
Subject (54)	+	-
Subject complement (54)	+	-
Adverbial (53)	+	-
Object complement (05)	-	+
Indirect object (0)		
REGISTER		
Interactional (74)	+	-
Administrative (70)	+	-
Student (70)	+	-
Academic (56)	+	-
Media (42)	+	-
FORMALITY OF TEXT		
Informal (72)	+	-
Formal (56)	+	-
POST-DEPENDENT WEIGHT		
Empty post-dependent (66)	+	-
Complement (58)	+	-
Complement+post-modifier (54)	+	-
Post-modifier (20)	-	+
(IN)DEFINITENESS		
Indefiniteness (62)	+	-
Definiteness (60)	+	-

Table 15. Independent effect of the variables investigated in relation to syntactic category of simple and complex (M2) premodifier*

Variables	Syntactic category of M1			M1 noun type		Form of M1 premodifier			Combinatory pattern of M2 premodifier				
	Noun	Adj	Adv	Common	Proper	*ing*	*ed*	attr	N+N	A+A	A+N	N+A	**Adv+ A**
SYNTACTIC FUNCTIONS													
Preposition complement				+	-	+	-	++					
Apposition				-	+	+	-	++					
Direct object				+	-	-	-	++					
Subject				+	-	-	+	++					
Subject complement				+	-	-	-	++					
Adverbial				+	-	-	+	++					
Object complement				+	-	-	-	++					
Indirect object				+	-	-	-	++					
REGISTER													
Interactional	+	++	-	+	-	-	+	++	+++	++++	++	+	-
Administrative	+	++	-	-	+	-	+	++	++	++++	+++	+	-
Student	+	++	-	+	-	-	+	++	++	++++	+++	+	-
Academic	+	++	-	+	-	-	-	++	+++	++++	++	+	-
Media	+	++	-	+	-	+	-	++	+	++++	+++	++	-
ANIMACY													
Animate head				+	-	-	+	++					
Inanimate head				+	-	-	+	++					

* *Ing* refers to participial *-ing, ed* represents participial *-ed,* while *attr* represents attributive

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