

# The complex sentence across written genres from native and nonnative contexts; a corpus-based study

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*This is a corpus-based study which sought to investigate the use of the complex sentence and its immediate internal clause combining mechanisms across three genres from the written components of the Ghanaian and British versions of the International Corpus of English. The study is based on the theoretical argumentation from functional register perspective that the distribution of linguistic elements across genres is functionally motivated. Texts examined were sampled from Academic Natural Science, Academic Social Science and Administrative Writing. The complex sentence received the attention of this study because it was the dominant structural sentence type across the three genres from these two native and nonnative contexts, a phenomenon we have argued in this study to be functionally motivated. An investigation of two internal clause combining dynamics among the three genres reveals that whereas the Academic Natural Science genres across Ghanaian and British corpora rely a lot on adverbial clauses, the Ghanaian and British academic social and administrative genres vary in their clause combining preferences, a phenomenon we have associated with genre-internal variability.*

**Keywords:** *complex sentence; clause complementation; dialectal variation; register variation; written genre*

## 1. Introduction

Complex structures are of a particular importance in English for academic purposes and English as a second language. Whereas complex structures facilitate the expression of complex thoughts in academic texts, in second language learning, they indicate one's level of proficiency. And the complex sentence is one important complex structure which embeds most other complex structures, including clauses and phrases. The observation is that it is more difficult, even for advanced nonnative speakers of English, to combine clauses in their speech to create complex sentences (Vercellotti & Packer 2016). However, work in this area has focused most predominantly on clause types, clause combination, finite and nonfinite clauses, subordination and the phrase structural (Biber & Gray 2010; Frimpong 2015; Vercellotti & Packer 2016). The complex sentence, as a structure, has received little attention. Apart from its treatment together with other types of sentence in grammar textbooks (Quirk et al. 1985; Wardhaugh 1995), the complex sentence is under-researched, especially to explore its usage dynamics and its internal structure across genres from different cultural perspectives – an engagement this study seeks to do. It explores the complex sentence and the complexity of its internal clause combining manifestations across genres from native and nonnative contexts.

It has been observed in the literature that the sentence has generally been understudied (Simpson 2004). One of the reasons why the sentence and its subtypes have not received much empirical attention may be attributed to the disagreement about the status of the sentence in the literature. In descriptive grammar (Quirk et al. 1985: 717) the sentence is considered the highest grammatical unit, followed by the clause, the phrase, the word and the morpheme on the grammatical rank scale. Elsewhere, however, especially in functional linguistics, the argument has been raised about the concept of the sentence as a stretch “of written text bounded by full

stops or the equivalent” (Thompson 2014: 23). The argument is that this definition makes the sentence a property of written texts since the features of the sentences mentioned in this definition are limited to written texts only. Thus, proponents of this argument consider the sentence as a problematic construct since its categorization has been based on written text (Eggins 2004: 126; Fawcett 2004). The problem really, as they rightly observe it, is with describing the sentence within spoken texts. As Thompson (2014: 22) puts it, “the sentence is an idealization of the written language which it is often difficult to impose on spoken language.” Based on this argument, certain grammars (c.f. Biber et al. 1999) intentionally avoid treating the sentence in any detail. However, much as this argument makes a lot of sense, it does not disqualify an empirical study of the sentence, especially when the investigation is limited to written data like the current study. The more reason why it is compellingly necessary to investigate the sentence (especially the complex subtype) particularly across written genres is that the written genre by its nature is observed to be complex (Biber 1988: 5). This means that discussions of complexity in written texts should begin with the sentence. This is because, it is partly through such investigations that we will be able to ascertain the levels and the nature of the complexity of written genres within the scope of the sentence.

One work that investigates aspects of the complex sentence empirically is Wiredu (2012). Though his study is one sided by focusing only on newspaper editorials from one newspaper from Ghana, he makes interesting observations about the relationship between language and context. His data reveals that the complex sentence is the most preferred type of sentence in the newspaper editorial genre, an observation he explains to be functional. His findings are much in line with Hopper and Traugott’s (2003: 177) observation that the organization of complex structures in text is genre-based and that certain complex sentence types, are noted to be associated particularly with written genres. A comparison of the use of the complex sentence across academic genres (Academic Social Science and Academic Natural Science) and a nonacademic written genre (Administrative Writing) will enable us to contribute to the debate about structural complexity across written genres and language use across native and nonnative dialects.

## **2. Between dialectal variation and register variation**

Linguistic variation has been explored from a variety of perspectives (Biber & Conrad 2009). Two of these perspectives are dialectal variation and functional register variation. From the perspective of dialectal variation, scholars in the new/world Englishes, especially, have argued that varieties of a language used in different geographical locations essentially reflect variable linguistic choices (Kachru 2006, Schneider 2007). In fact, Kachru was among the first scholars to make this observation. He explained dialectal variation between native and nonnative Englishes using the concentric circle according to which varieties of English around the world are classified into the inner circle (i.e. the varieties of English spoken by native speakers), the outer circle (i.e. the variety of English spoken in former British colonies where English is used as second/official language) and the expanding circle (places where English is used as an international language).

In the past decade, one of the most compelling arguments for explaining varieties of English around the world has been advanced by Schneider (2003). In his developmental dynamic model, Schneider (2003: 233) has argued that dialects of English undergo 5 phases of growth from the day of their implantation on a new soil to the day they become fully-fledged

varieties of the English language. The crux of his argument is that “consistent sociolinguistic and language-contact conditions” involving “English speaking settlers and an indigenous people and their languages” work together to shape the English language introduced to the area into a novel dialect of the English language (Schneider 2003: 233). From this evolutionary perspective, one can place the English used in Ghana at the endonormative stabilization phase, though there are still lingering signs of the nativization phase. That is, though the complaints about falling standards of English which characterize the nativization phase have minimized, many Ghanaian users of English are not aware that they speak a Ghanaian variety of English. And yet, Dako (2003) has documented copious examples of Ghanaian local expressions used in English texts produced by educated Ghanaians. Huber (2004) has also observed grammatical features which are peculiar to the English used in Ghana. These and other linguistic features have been noted to be uniquely Ghanaian (see Sey 1973; Koranteng 2006; Huber 2014). The audacity of Ghanaian users of English to innovate with the language and use local norms in newspapers and novels as captured in the literature suggests the Ghanaian English is at Schneider’s endonormative phase which “is marked by the gradual adoption and acceptance of an indigenous linguistic norm, supported by a new, locally rooted linguistic self-confidence” (2003: 249).

The observation in the literature is that language change from dialectal perspective exists not only in the creation and use of entirely new linguistic forms but also in a restructuring of the linguistic features of the old native English stock (Huber 2014: 104). Thus, Huber (2014: 103) would argue that in the area of the relative clause construction, the Ghanaian English is different from the British English only in the ways certain features of the relative clause structure has been reorganized. He observes, for instance, a variation in the way the relativizers – *which*, *who* and *that* – have been used.

From functional register perspective, on the other hand, linguistic variation has been construed as variation in linguistic choices as a result of variation in the situational context of language use (Bloor & Bloor 2004: 2). That is, certain linguistic features have been preferred in a particular text in comparison with others because those features are suitable to the situational background of the text (Biber & Conrad 2009: 33). Besides, those linguistic features enable the particular text (register) to achieve a certain communicative function. The situational context has been theorized in systemic functional linguistics into the three register variables of *field*, *tenor* and *mode* according to which a text reflects an area of activity (field), a social contact and status (tenor) and the channel of communication (mode) (Egins 2004: 9).

From another, perhaps, more simplified register perspective, Biber & Conrad (2009: 31) explain register variation from a set of seven situational variables which include the participants of the communication, the relationship between the participants of the communication, the mode of communication, the topic, the setting, production and comprehension circumstances and the purpose of communication. These set of situational variables are deemed to constitute the functional background that influence linguistic choices across texts. As they put it

...texts from different registers are produced in fundamentally different circumstances, for fundamentally different communicative purposes; and as a result, these texts often use completely different sets of linguistic features that are functionally appropriate for those circumstances and purposes (Biber & Conrad 2009: 256).

The bridge between dialectal variation and register variation which has not received adequate attention in the literature, is the focus of this study on register variation across genres from Ghanaian and British dialects of the English language. The argument in the literature is that texts from the same genres share similar linguistic features across dialects of a language. Biber & Conrad (2009: 12) capture this argument more cogently as follows

[R]egardless of any dialect differences, speakers using the same register are doing similar communicative tasks; therefore, in most basic respects the characteristic language features used in a given situation are similar across speakers from different dialects.

This similarity is of course different from core grammar in the sense that whereas core grammar is a form of standard linguistic features shared across all varieties of a particular language, register similarity is about the organization of features of core grammar based on functional parameters. Our data from the three genres across the two dialectal contexts should be able to give us insights about linguistic variation at the dialect-register interface.

### 3. Language and function

The relationship between language and function has been explored from various perspectives in linguistics. Interestingly, each of the conceptualizations of the relationship between language and function brushes with an aspect of context. From semantico-grammatical perspective, linguistic function is considered a property of the co-text according to which a grammatical element is assigned a functional role (actor, goal, theme, instrument, senser, etc.) based on its placement in the syntagm of the sentence. From pragmatic perspective, function is based on the cultural context where meaning of an utterance is not only inferred from the co-text but also from the circumstantial background of the speech act event.

Language function in this paper is taken from the register perspective (Biber & Conrad 2009; Halliday & Matthiessen 2004; 2014). From this perspective, the function of a linguistic form is based on the situational context. That is the situational background of a text makes certain linguistic features more suitable in a particular text than in others. For Biber and Conrad, the relationship between language and function is the association of ‘pervasive linguistic features’ with a language variety for functional purposes. This is what Halliday & Matthiessen from the systemic functional linguistic perspective capture as follows

A register is a functional variety of language (Halliday 1978) – the patterns of instantiation of the overall system associated with a given type of context (a situation type). These patterns of instantiation show up quantitatively as adjustments in the systemic probabilities of language; a register can be represented as a particular setting of systemic probabilities (Halliday & Matthiessen 2004: 27, 28).

The key components of registerial function include ‘*patterns of instantiation*’ of linguistic variables (i.e. linguistic choices), a *situational context* and *quantitative variability* of linguistic features across texts. In this study, structural sentences and the internal patterns of clause combination are identified and counted across the three genres from the two dialectal contexts. Patterns of realization are compared both across the genres and across the two dialects. It is anticipated that the shared situational contexts will induce similar patterns of distribution of

these grammatical features investigated across the same genres from the Ghanaian and British corpora.

#### 4. The complex sentence and its immediate internal constituents

Structurally, sentences in English may be grouped into simple sentences and non-simple sentences (Quirk et al. 1985: 987). As the name suggests, a simple sentence has a simple internal clause structure, having only one independent clause. Non-simple sentences are multi-clausal sentence structures made up complex, compound and compound complex sentences (Wardhaugh 1995: 115). The major difference between the complex sentence and the compound sentence is that whereas the compound sentence combines at least two independent clauses, the complex sentence combines one independent clause with at least one dependent clause. The compound complex sentence, of course, has features of the complex and the compound sentences whose structure has at least two independent clauses and at least one dependent clause (Quirk et al. 1985: 987). Examples of these sentence types are as follows:

- (1) Simple sentence: In addition algae such as *Chlorella*, *Euglena*, *Oscillatoria*, *Ulothrix* and *Stigeoclonium* will be abundant. (ICE-GB:W2A-021 #1)  
(A MONO CLAUSAL SENTENCE)
- (2) Complex sentence: For National Insurance purposes, your working life is the number of tax years from the beginning of the tax year in which you reached the age of 16 up to the end of the one before you reach pension age (or death, if earlier). (ICE-GB:W2D-004 #1)  
(A MULTI-CLAUSAL SENTENCE WITH A FINITE INDEPENDENT CLAUSE AND 2 EMBEDDED CLAUSES)
- (3) Compound sentence: Students listen to radio programmes, watch television and engage in conversation with friends and family. (ICE-GH:W2A-001#18)  
(A MULTI-CLAUSAL SENTENCE WITH THREE COORDINATED INDEPENDENT CLAUSES)
- (4) Compound complex sentence: These responses reveal a problem that deserves attention and the problem might be posed in the form of a question (ICE-GH:W2A-001#16)  
(A MULTI-CLAUSAL SENTENCE WITH 2 INDEPENDENT CLAUSES AND 1 DEPENDENT CLAUSE)

Of these four structural sentence types, the complex sentence and its allied compound complex sentence are the most versatile and so have attracted my research curiosity. That is, a closer look at the sentences above reveals that whereas the compound sentence is a coordination of two equivalent clauses both of which are finite and the simple sentence is a single finite independent clause, the complex sentence is a layered grammatical structure whose complexity may be varied. In sentence (2) above, the complex sentence, for instance, has one finite independent clause which is the entire sentence and two subordinate clauses (*...in which you reached the age of 16* and *before you reach pension age*) which are rank shifted within noun phrases. Rank shifting, also referred to as embedding, is an interesting phenomenon where

clauses, which are higher in the grammatical rank than the phrase, are used to modify a phrase (Halliday & Matthiessen 2014: 382). However, in alternative perspectives, we have complex sentences in which the subordinate clauses are dependent rather on the main clause or are clause constituents. That is, it is possible for dependent clauses to be subjects, objects/complements or adjuncts as highlighted in sentences (5) to (7) below.

- (5) **Expanding one's knowledge of the world and acquiring information on lecture strategies which will allow one's mind to work back and forth** seemed not to feature in these responses. (ICE-GH:W2A-001#99)  
(A COMPLEX SENTENCE WITH PARTICIPIAL CLAUSE AS A CLAUSAL SUBJECT)
- (6) The paper reveals **that several students have not given any thought to academic listening as a skill that can enhance their ability to derive maximum benefits from lectures during lecture hours.** (ICE-GH:W2A-001#3)  
(A COMPLEX SENTENCE WITH COMPLEMENT CLAUSE AS CLAUSAL OBJECT)
- (7) **If you do not receive an award from the Department of Health** you may still be eligible for an award from your LEA for certain courses. (ICE-GB:W2D-003 #15)  
(A COMPLEX SENTENCE WITH ADJUNCT AS DEPENDENT CLAUSE)

This means that a complex sentence offers the possibility for four functional types of dependent clauses: the relative clause postmodifies the noun phrase; the clausal subject, the clausal object and adverbial clause are dependent clauses which function as clause constituents (Payne 2011: 334). Of these clause types, clausal subjects and clausal objects/complements, as in sentences (5) and (6), are required in their main clauses, unlike adverbial clauses. Particularly, clausal objects/complements are considered special types of embedding by which a dependent clause is embedded within a matrix clause (Payne 2011: 337). These are clauses that are used after complement-taking predicators and after copula verbs (subject complements). It is not automatic that complement clauses will be more preferred in a particular genre simply because they are required in their main clause. This is because, complement clauses compete with phrases in the structure of the sentence. But more interestingly, the fact that adverbial clauses and other adverbial structures are optional in a sentence makes their choices particularly informative. This study focused on the use of clausal objects/complements and circumstantial adverbial clauses across the two academic genres and the legal administrative genre explored in this study. Payne (2011: 344) explains the distinction between complements and adverbial clauses as follows

‘Adjunct’ is a good term since the term “Complement” implies completion, and a phrase or clause does not express a complete thought until all its Complement positions are filled. On the other hand, adverbial clauses and phrases attach to already complete clauses. The adverbial clause simply adds some additional information to what is expressed in the other clause.

It is hoped that this engagement will enhance our understanding of the variation that exists across these genres from native and nonnative English contexts. The comparative dimension of this study, it must be noted, is not an end in itself since the linguistic variables explored are

not interchangeable or competing concepts. The aim is rather to explore the stylistic or register implications in the distribution of these structures. Since adverbial structures are optional in the syntagm of the sentence the nature of their use – minimal or otherwise across a set of genres – should engage our linguistic curiosity.

Thus, the complex sentence was selected for this study not only because it is the preferred sentence pattern in our written genres but also because the internal complexity of the complex sentence offers an opportunity to explore the structural complexity of the three genres in much detail.

## **5. Methodology**

This work is a corpus-based comparative study. The three genres investigated (Academic Natural Science, Academic Social Science and Administrative Writing) were culled from the written components of Ghanaian and British parallel International Corpus of English (ICE) corpora. In order to facilitate comparative study of the Englishes spoken around the globe, compilation of the various national ICE sub-corpora focused on comparable features: about 1 million words, featuring 15 spoken genres and 17 written genres, annotated similarly in key areas. Thus, selection of texts for comparison was not difficult.

For the purpose of this study, we selected the first five texts for each of the 3 genres investigated across the two dialectal contexts. This means that in all 30 texts were analyzed in this study. For each of the texts selected, 500 words were excerpted from the body of the text for detailed analysis. This was done by scooping away the first 200 words after which the following 500 words were gleaned for the study. This is in line with Biber & Conrad's (2009: 6) argument that for register analysis one does not really need an entire text because the grammatical features that are normally investigated are found in any part of the text. However, the caution was to guard against scraping the introductory parts of the texts studied for fear that they may not give us a true picture of the genres investigated. The excerpted texts realized a total of 625 sentences which have been described in this study.

## **6. Coding**

The first step towards the analysis was to manually code the corpus data excerpted with the grammatical features explored. In order to relate the complex sentence with the other types of sentences, simple, compound and compound complex sentences were also coded into the data. In the same way, the internal clause constituents were identified and categorized into complement clause and adverbial clause structures.

To begin with, the original notations for the sub-genres investigated were maintained. These notations, which are used in the analysis, are captured in Table 1 below.

Table 1: Parallel Notations Across ICE GH and ICE GB

NOTATION	INTERPRETATION
ICE-GH:W2A-021-025	ICE Ghana, Written Corpus, Academic Natural Science, Text 21 to 25
ICE-GH:W2A-001-005	ICE Ghana, Written Corpus, Academic Social Science, Text 1 to 5
ICE-GH:W2D-001-005	ICE Ghana, Written Corpus, Administrative Writing, Text 1 to 5
ICE-GB:W2A-021-025	ICE Great Britain, Written Corpus, Academic Natural Science, Text 21 to 25
ICE-GB:W2A-011-015	ICE Great Britain, Written Corpus, Academic Social Science, Text 11 to 15
ICE-GB:W2D-001-005	ICE Great Britain, Written Corpus, Administrative Writing, Text 1 to 5

For the sentence types, since we were dealing with written data, determination of sentence types was not difficult. One observes that written texts, unlike spoken texts, are carefully produced to ensure that grammatical structures are fully realized and marked appropriately. Classification of sentence types were based on the two models by Quirk et al. (1985: 987) and Wardhaugh (1995: 115) which identify simple, complex, compound and compound complex sentences based on the number and types of clauses in them. For clausal objects/complement and adverbial clause structures, we scrutinized the nature of clause combining strategies in the complex sentence across the genres from the sub-dialectal corpora. Downing & Locke (2006: 275) argue that embedding, rather than adjunction, offers the tightest structural integration. We distinguish between clausal object/complement clause embedding and adverbial clauses based on Payne (2011) whose distinction between clausal object/complement and adjuncts is captured under section 4 above.

After these grammatical features were coded and checked by a research assistant, attested structures were compared and described using interpretive qualitative methodology. This involved relating attested grammatical patterns with the situational context within which the genres were generated (Biber & Conrad 2009: 6).

## 7. The Genres studied

The genres explored – academic natural science, academic social science and administrative writing – are all written genres. As written genres, they are deemed equally well planned and elaborate. However, these genres differ in several respects, making one anticipate variable patterns of distribution of grammatical elements. Essentially, these genres differ in the field, participants involved in the communication and in their communicative purpose.

In terms of the field, the areas of human endeavor covered are natural science, social science and administration. There is a sense to expect that these three registers would use language differently. In terms of participants, both natural science and social science are academic texts. These are typically texts from university textbooks and academic journals. Thus, communication across these genres is from an expert to colleague experts or to students.



Administrative writing, however, involves a professional expert communicating administrative instructions to lay people. The different orientations in participants across these genres are crucial parameters that have a potential of influencing linguistic choices.

Finally, the three genres differ in their communicative purposes. Thus, whereas the two academic genres are research/academic genres whose function is to educate and inform colleagues and students about research findings and new developments in the area, the one communicates social information and the other, hard science. Administrative writing, however, serves the communicative purpose of instructing its audience. These are the variable factors that we deem will influence distributional patterns of the complex sentences and their internal clause combination patterns across the genres.

## **8. Analytical methodology**

This work straddles quantitative and qualitative methods. Register-based studies typically combine the two approaches. As Biber puts it

...the two approaches have complementary strengths and weaknesses...Quantitative analysis gives a solid empirical foundation to the findings; non-quantitative analyses are required for the interpretation. Either type of analysis in isolation gives an incomplete description (Biber 1988: 52).

This has been achieved in this work by describing the situational characteristics of the genres involved in section 7, describing the targeted linguistic features in section 4 and interpreting patterns of distribution of the targeted linguistic features functionally by relating the situational features with the patterns of distribution of the linguistic features in section 9.1 and 9.2 (Biber & Conrad 2009).

## **9. Data analysis and discussion**

Patterns of distribution of structural sentence types are presented below. The dominance of the complex sentence throughout the three genres across the two dialects studied motivated our exploration of the clause combining strategies prevalent across the three genres.

### *9.1 Structural sentence types*

There is no disputing the fact that the complex sentence is the most preferred sentence pattern in written registers, as our data suggest. And as can be seen in Table 2, the dominance of the complex sentence cuts across both Ghanaian and British genres. This is part of the structural evidence that written texts are, by nature, complex and elaborated (Biber 1988). Our data reveal the patterns of distribution of structural sentence types captured in Table 2 below.

Table 2: Distribution of sentence type

	SOCGH		SOCGB		NATGH		NATGB		ADMGH		ADMGB	
	%		%		%		%		%		%	
SIMP	53	41	26	28	32	28	35	34	18	20	31	31
CMPL	<b>55</b>	<b>42</b>	<b>52</b>	<b>57</b>	<b>59</b>	<b>53</b>	<b>46</b>	<b>45</b>	<b>63</b>	<b>72</b>	<b>52</b>	<b>51</b>
COMP	13	10	9	10	11	10	11	11	2	2	8	8
C CMPL	<b>9</b>	<b>7</b>	<b>5</b>	<b>5</b>	<b>10</b>	<b>9</b>	<b>10</b>	<b>10</b>	<b>5</b>	<b>6</b>	<b>10</b>	<b>10</b>
	<b>130</b>	<b>100</b>	<b>92</b>	<b>100</b>	<b>112</b>	<b>100</b>	<b>102</b>	<b>100</b>	<b>88</b>	<b>100</b>	<b>101</b>	<b>100</b>

The dominance of the complex sentence type is a good motivation for exploring the complex sentence in detail. However, looking at the patterns of distribution of the complex sentence across the three genres, one cannot but argue that registerial motivation more than anything else influenced the choices of this type of sentence. The first indication of this dominance is that the complex sentence is somehow suited to the situational context of the three genres investigated. However, the lack of regularity in the patterns of distribution of these grammatical features among genres across the two dialectal contexts explored makes it difficult to make bold generalizations.

For instance, when we combine attestations of compound complex sentences which have complex sentences within them with complex sentences, we observe irregular usage variations both cross-generically and cross-dialectally. As can be compared in Figure 1 below, usage variations for complex and compound complex sentences across the Ghanaian and British genres are between 49% and 62% for Academic Social Science, 62% and 55% for Academic Natural Science and 71% and 61% for Administrative Writing. The only consistency here is the fact that the complex and compound complex sentences are dominant across the three genres. Cross-dialectally, the observable variations are 49%, 62% and 77% for Ghanaian Academic Social Science, Academic Natural Science and Administrative Writing and 62%, 55% and 61% for British Academic Social Science, Academic Natural Science and Administrative Writing. These patterns, captured in Figure 1 below, show some similarity among the British genres, especially between Academic Social Science and Administrative Writing.

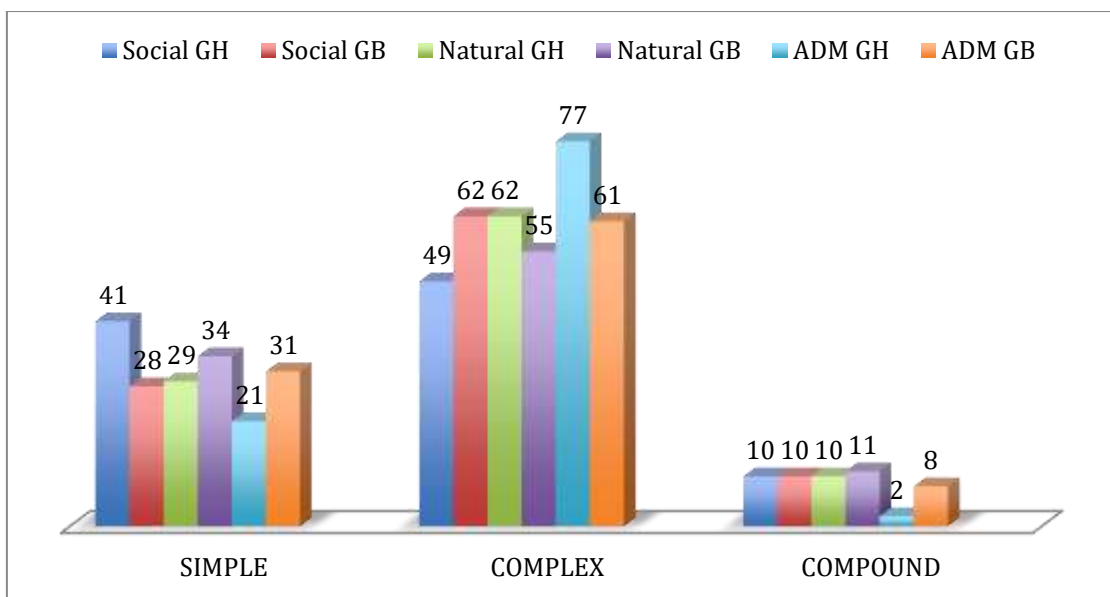


Figure 1: The dominance of the complex sentence types across the 3 genres

What these representations mean is that the complex sentence, such as the ones in sentence (8) to (11) are dominant across data from our two written corpora, though in variable patterns.

- (8) Their primary role is likely to be in the removal of nutrients (nitrogen and phosphorus), although in the absence of light it is possible that they may behave heterotrophically and play a small part in BOD removal. ICE-GB: W2A-021 #2  
(A COMPLEX SENTENCE WITH EMBEDDED AND ADJUNCTIVE DEPENDENT CLAUSES)
- (9) From the above reasoning, we can consider the mole as the unit used by chemists to express large number of atoms, ions, molecules, and any identifiable species. ICE-GH:W2A-025 #25  
(A COMPLEX SENTENCE WITH TWO EMBEDDED DEPENDENT CLAUSES)
- (10) A parent or any other person who is legally liable to maintain a child or contribute towards the maintenance of the child is under a duty to supply the necessities of health, life, education and reasonable shelter for the child. ICE-GH:W2D-004 #1  
(A COMPLEX SENTENCE WITH THREE EMBEDDED DEPENDENT CLAUSES)
- (11) To switch the metaphor: rather than producing a melting-pot in which differences disappear, the increased input has resulted in an everexpanding smorgasbord. ICE-GB:W2A-012 #14  
(A COMPLEX SENTENCE WITH THREE DEPENDENT CLAUSES)

Apart from the fact that the complex sentence has been identified with planned discourse, our data indicate that the complex sentence is essential for the genres we investigated and so is dominant across these genres from the two dialectal perspectives. It is observed that the two academic genres have a tendency of integrating ideas from related extant literature to establish best applicable methodologies and theories. It is not surprising that the complex and compound

complex sentences should be dominant to help perform the communicative function of integration of ideas. Similarly, one observes that the instructional and directive nature of administrative writing equally involves integrating ideas. Thus, even though a close study of the types of complex sentence used across the administrative texts reveals some variability across Ghanaian and British texts, one observes at this stage that the complex sentence is the most preferred across Ghanaian and British administrative texts.

For the purpose of stylistic elegance and perhaps also for organization of ideas into logical argumentation, it makes sense that the simple and compound sentences are not the preferred types. This is because whereas a succession of simple sentences frustrates the flow of communication, especially when written, pairing of simple sentences into compound sentences limits the extent and dynamism of the logical argumentation one can make. For their communicative functions, whereas the simple sentences typically “engender frenetic or fast-paced feel” to a text, “the symmetrical nature of the connection between their units makes them [compound sentences] a favoured style in material designed for junior readers” (Simpson 2004: 60). Thus, the participants of the three texts explored (adults versus experts) the need of the authors to synthesize ideas and to argue out positions tend to attract complex sentence structures. As Halliday & Matthiessen (2014: 438) argue in their tactic relations of clauses, complex structures are issues of logical relations between ideas. Thus, the dominance of the complex sentence across the three genres from the native and nonnative Ghanaian and British contexts can be argued as a strategy that facilitates a variety of ideas to be logically expressed in sentence forms.

For example, the dynamism of the complex sentence in sentence 8 above resides in the complexity of the variety of clause combining relations within the sentence. One observes that in sentence (8) there are 4 clauses from different clause typologies which are combined using different combinatorial strategies. We observe, for instance, dependency at various levels. At the level of the clause we have ‘*[T]heir primary role is likely to be in the removal of nutrients and although in the absence of light it is possible that they may behave heterotrophically*’ which exhibit a dependency relation between a main clause and a subordinate clause. A more detailed investigation reveals that even within these clauses are other clausal units such as the clausal subject (*that they may behave heterotrophically*). At the level of the phrase, we have an instance in which a phrase is being postmodified by a clause: ‘to be in the removal of nutrients...’ These are tactic and embedding or rankshifted relations – relations argued by Downing & Locke (2006: 275) as reflecting the degrees of the integration of events from the point of view of the speaker with embedding encoding a tighter integration.

Payne (2011:339) observes that complementation in particular “presents a major challenge for second language learners” because though all the structural types of dependent clauses can occur as complement clauses not all of them can complement any type of complement-taking predicator. One therefore expects variability to exist in the use of these structures across different texts from native and nonnative contexts. The curiosity therefore was to explore the complex sentence further to verify whether the data would exhibit regular patterns in the usage of these combinatorial strategies. That is, does the use of the two clause-combining strategies exhibit a distinction between native and nonnative language use or a registerial differentiation across the three genres from the two dialects of English?

## 9.2 Clausal object/complements and adverbial clauses

Our data reveal a mixture of realizations in the distribution of the two clause combining strategies across the three genres. We observed as recorded in Table 3 below that only the academic natural science genres across Ghanaian and British corpora had similar patterns of realization. That is, whereas circumstantial clauses were the dominant clause combining strategy for the natural science genres across the British and Ghanaian corpora, variable patterns of clause combining realizations were observed across Academic Social Science and Administrative Writing as captured in Table 3 below.

Table 3: Usage patterns of clause Adjuncts and clause complements

	SOCGH		SOSGB		NATGH		NATGB		ADMGH		ADMGB	
		%		%		%		%		%		%
COMPLEM	22	<b>44</b>	47	<b>70</b>	26	<b>35</b>	16	<b>27</b>	47	<b>66</b>	7	<b>9</b>
ADJUNCTS	28	<b>56</b>	20	<b>30</b>	48	<b>65</b>	44	<b>73</b>	24	<b>34</b>	69	<b>91</b>
	<b>50</b>	<b>100</b>	<b>67</b>	<b>100</b>	<b>74</b>	<b>100</b>	<b>60</b>	<b>100</b>	<b>71</b>	<b>100</b>	<b>76</b>	<b>100</b>

As observed in Table 3 above, it is only the natural science genre alone that reflects some form of registerial variability. It is observable that both Ghanaian and British natural science genres show consistency in their preference for adverbial clauses. Examples of the adverbial clauses that were dominant across Ghanaian and British natural science texts include the highlighted in sentences (12) and (13) below

- (12) **To recrystallize an impure solid**, we select a solvent that will dissolve the solid **when the solvent is hot** but not **when the solvent is cold**. ICE-GH:W2A-021#88  
(A COMPLEX SENTENCE WHICH HAS 3 CIRCUMSTANTIAL AND TEMPORAL ADVERBIAL CLAUSES)
- (13) Isolated carbonate platforms occur in the Devonian of western Canada, **where reef development is more extensive on the windward side**. W2A-023#27  
(A COMPLEX SENTENCE WHOSE DEPENDENT CLAUSE IS A LOCATIVE ADVERBIAL CLAUSE)

The results for the natural sciences support the register argument that similarities in the situational context induce similar linguistic choices even across different dialects of a language (Biber & Conrad 2009:12). The preference for adverbial clauses of Academic Natural Science from both the Ghanaian and British corpora seems to correspond with the situational context of the natural science genre. One principal communicative function of academic writing – and for that matter the Academic Natural Science - is not just to report on findings but also to integrate knowledge and it seems that these hypotactic adverbial clause structures are crucial in realizing these communicative goals.

Similarly, the consistency in the usage of clause combination patterns across the natural science texts is in support of another argumentation made by Biber and Gray (2010: 4) whose investigation of academic registers observes that the natural sciences are not as structurally elaborated as the humanities. This means, perhaps, that since the language of natural science is tilted towards structural compression rather than structural elaboration (Biber & Gray 2010:

4), complement positions are mostly filled by phrases. The problem that is still outstanding is why circumstantial notions are not the preferred type among the academic social science texts.

The academic social science and the administrative writing genres, as may be seen in Table 3, did not achieve any consistent patterns of realization. That is, whereas adverbial clauses were the preferred clause combination in the Ghanaian Academic Social Science, clause complementation is the preferred pattern in the British corpus. This though is not a strong evidence to enable one to argue that the Ghanaian users of the English language are faced with the clause complementation challenge observed by Payne (2011: 339); for, in the Administrative Writing genre, clause complementation is the dominant pattern in the Ghanaian data. What can be said now is that whereas clause combination patterns highlighted in sentence (14) are preferred in Ghanaian Academic Social Science, those highlighted in (16) and (17) are preferred in British Social Science.

(14) **But when Governor Guggisberg, one of the founders of Achimota, suggested that Achimota College should be linked with London University, the Gold Coast Advisory Education Committee rejected the idea because it would mean Achimota losing the opportunity to develop the indigenous system of higher education in Africa.** ICE-GH:W2A-005

(A COMPLEX SENTENCE WITH 5 DEPENDENT CLAUSES: 2 ADVERBIAL CLAUSES, 3 EMBEDDED CLAUSES)

(15) **Consequently, it was suggested that the problem of understanding codes which could not be related to jobs could be solved by having definitions for each code specific to each group.** ICE-GB:W2A-016

(A COMPLEX SENTENCE WITH 3 EMBEDDED CLAUSES)

(16) **The dramatic increases in capacity planned by the Japanese producers have been paralleled by reinvestment and capacity increases by the US and European auto companies and it is estimated that between 1985 and 1990 European production capacity will have increased by almost 20 per cent - from 11.2 million to 13.2 million units per annum.** ICE-GB:W2A-016

(A COMPOUND COMPLEX SENTENCE WITH 2 INDEPENDENT CLAUSES AND 2 EMBEDDED CLAUSES)

From dialectal perspective, these patterns of distribution have some implications. In the first place, one observes that whereas two of the British genres (Academic Natural Science and Administrative Writing) rely on hypotactic circumstantial clause combination, two of the Ghanaian genres (Academic Social Science and Academic Natural Science) rely on clause complementation. What is more interesting is the disparity between the usage patterns of Ghanaian Administrative Writing and its British counterpart.

What one expected was that the participants involved in the administrative writing (expert addressors versus non-expert audience) would occasion a structural simplicity involving circumstantial relations – a phenomenon achieved somehow in the British Administrative Writing. The argument is that, as observed above, circumstantial relations are easier to generate and to comprehend than complementation (Payne 2011; Halliday & Matthiessen 2014). Thus, for the audience in the administrative writing who may not be experts to easily comprehend the message communicated, more circumstantial relations rather than

complementation patterns are required. The reality, however, is that there are more circumstantial relations (90.8%) in the British Administrative Writing but more complement clauses in the Ghanaian Administrative Writing (66.2%).

What perhaps accounts for the disparity in the distribution of circumstantial relations and clause complementation across Ghanaian and British administrative genres is that whereas texts in British Administrative Writing are mainly instructions on social service policies obviously intended for lay people, texts in the Ghanaian administrative genre are typically legal contracts between the social service provider and an expert who may intervene on behalf of a client. Excerpts in Table 4 below show the variation both in the kind of texts making up the administrative genres across these two native and nonnative contexts and in the variability of the prevalent clause combining strategies.

Table 4: Variability across Ghanaian and British Administrative genres

ADM WRITING (GB W2D-004 #15 – 17)	ADM WRITING (GH W2D-001#2 &9)
<p>You must pay these <i>if you are normally self-employed, unless you have applied for and been granted exception because your earnings are below the exception limit for Class 2 contributions.</i></p> <p><i>If you are excepted you may, if you wish, pay Class 2 contributions voluntarily to keep up your right to the benefits they provide.</i></p> <p>Class 2 contributions are paid at a flat rate – you pay the same amount <i>however much you earn.</i></p>	<p>The President may, acting in accordance with the advice of the Council of State, by Proclamation published in the Gazette, declare <i>that a state of emergency exists in Ghana or in any part of Ghana</i> for the purposes of the provisions of this Constitution.</p> <p>For the avoidance of doubt, it is hereby declared <i>that the provisions of any enactment, other than an Act of Parliament, dealing with a state of emergency declared under clause (1) of this article shall apply only to that part of Ghana where the emergency exists.</i></p>

Thus, it is indicative, for example, across excerpts in Table 4 that instructions in the British administrative genre are made directly to the service consumer predominantly with the use of the second person pronoun. Besides, the dominant clause combining patterns in the British Administrative Writing are circumstantial adjunctive structures, which like all other forms of tactic relations, are relatively easy to produce (Eggins 2004: 269-270) and so by implication easy to comprehend. What it means is that, for the British administrative texts, after the main information has been provided in the main clause, which is usually not stuffed with complementation clauses, there are several adjunctive clauses to provide background information. As observable in Table 4 above, each of the main instructions in the British administrative register is backed by at least one circumstantial clause which in the excerpts in Table 4 are predominantly conditional adjuncts such as those in the examples below:

- ...if you are normally self-employed,*
- ...unless you have applied for and been granted exception*
- ...because your earnings are below the exception limit for Class 2 contributions*
- ...If you are excepted*

*...if you wish*  
*...however much you earn*

For the Ghanaian administrative texts, however, language is used as though it is meant for 'whom it may concern'. As may be seen in the second column in Table 4 above, the message is not directed towards the consumer of the social service. It looks more like a legal document which is meant for an expert to interpret to the service consumer. Thus, typical of the complexity associated with legal documents, both main clauses and subordinate clauses are padded with clause complements and other embedded clauses. Although this phenomenon is not limited to the Ghanaian data, the conspicuous difference is that whereas a list of ideas typically gets expressed in the Ghanaian data through clausal complements which themselves embed other clauses as in sentence (17) below, in the British administrative texts, they are typically expressed in circumstantial structures as in sentence (18).

- (17) The objectives of the policy are to:
- Promote widespread acceptance and observance of the Convention on the Rights of the Child;
  - Promote the observance and enforcement of the Children's Act 1998, Act 560;
  - Integrate ECCD issues into Development Planning at the community, district, regional and national levels;
  - Provide pre-school education in collaboration with District Assemblies, the private Sector, Community Based Organisations (CBO), NGOs and Faith Based Organisations (FBOs);
  - Provide fee-free tuition in pre-schools;
  - Provide for the preparation (training) and upgrading of pre-school teachers and caregivers;
  - Promote nutrition and household food security;
  - Reduce the high Infant and Under-Five Mortality Rates;
  - Provide information and skills to parents and other caregivers;
  - Improve income earning capacity of parents;
  - Develop an in-depth preparatory programme of action on ECCD and HIV/AIDS;
  - Provide for the preparation and upgrading of preschool teachers and caregivers handling children with special needs.
- (GH:W2D-003 #34 - #55)

The communicative purpose of this single sentence with more than 10 complement clauses some of which also embed other clauses is to provide basic information. As such, it minimizes or avoids completely the use of circumstantial information. Such communication is too tight and would be more appreciated by experts or professionals.

The style of writing for the British Administrative genre, on the other hand, is a direct one, as already observed above. The addresser is directly addressing the addressee and the language somehow reflects a relationship between an expert addresser and a non-expert addressee. And to make the addressee understand the information communicated, the addresser uses a strategy which usually involves two things. That is, there is usually an instruction which is the main message such as '*You may pay these voluntarily*'. This instruction is usually given at least one background or circumstantial information such as 'to help you qualify for basic



Retirement Pension or widows' benefits', 'if you are not liable for contributions', etc. in sentence (18) below.

- (18) You may pay these voluntarily **to help you qualify for basic**  
MAIN MESSAGE CIRCUMSTANCIAL INFO 1

**Retirement Pension or widows' benefits, if:**

- you are not liable for contributions; or  
CIRCUMSTANTIAL INFO 2
- you have been excepted from Class 2 contributions; or  
CIRCUMSTANTIAL INFO 3
- your contribution record is not good enough to qualify for benefit.  
CIRCUMSTANTIAL INFO 4 (GB W2D-004 # 18)

## 10. Limitations to the study

This variable use of language across the two sociocultural contexts is interesting for a number of reasons. The most obvious implication relates to the compilation of the International Corpus of English. One observes that particular genres have wide coverage, having subgenres within them. The administrative genre, for instance, has within it direct instructions and legal administrative documents. It appears that whereas the Ghanaian administrative texts selected for this study were predominantly administrative legal texts, their British counterparts were predominantly instructional texts. This creates a disparity in linguistic choices which perhaps reflected across the Ghanaian and British administrative texts.

Besides, it makes sense to expect that grammatical elements should correspond to situational contexts, especially to communicative functions. However, because there is no scientific method for corresponding grammatical elements to situational contexts, register analysis is still a subjective enterprise.

## 11. Conclusion

This study has explored aspects of the sentence and its immediate internal constituents across three written genres from Ghanaian and British corpus data with the hope of establishing whether functional or dialectal motivation influences the distribution of these grammatical elements. The consistency of the dominance of the complex sentence across the three genres (Academic Natural Science and Academic Social Science and Administrative Writing) led us to argue that this sentence type has functional significance for the three genres. Concerning the two clause combining strategies explored in this study, our data again reveals a form of registerial consistency across the natural science genres from the Ghanaian and British corpora. It was observed that adjunctive clause combination is the preferred strategy for both Ghanaian and British academic natural science genres. The other two genres realized variable patterns of clause complementation and adjunction. Some dialectal patterns were equally detected. It was observed that two of the Ghanaian genres (Academic Social Science and Academic Natural Science) relied predominantly on circumstantial clause patterns. Similarly, two British genres

(Academic Natural Science and Administrative Writing) relied predominantly on circumstantial clause patterns.

For administrative writing, it was observed that whereas the Ghanaian administrative texts showed preference for clause complementation, the British administrative texts had dominance of circumstantial relations. This variability, we have argued, is a reflection of internal variation across the Ghanaian and British administrative genres. As our corpus data reveal, whereas the Ghanaian administrative texts are made up of legal social policies, the British counterparts are dominantly direct instructional texts. This variability is relevant to the situational context of the administrative genre. It reflects variability in participants of the discourse and communicative function.

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