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# Logico-semantic Relations of Clause Combinations in Selected Inaugural Lectures in Southwestern Nigeria Universities

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## Abstract

This study investigates the use of Logico-semantic relations of clause combinations in selected inaugural lectures from three universities in Southwestern Nigeria. The data comprises six purposively selected inaugural lectures from different disciplines; Obafemi Awolowo University-(Faculties of Science and Technology), University of Ibadan-(Medical Science and Social Science), and University of Lagos-(Arts and Education). The non-simple sentences were extracted from the lectures and analysed based on Halliday's theory of Systemic Functional Grammar. The results show that the logical patterns suitable for academic discourse in the field of Technology and Education are extension and enhancement while in the Sciences, Medical Sciences, Arts and Education are extension and elaboration. The elaboration patterns in the fields of Sciences, Medical Sciences, Arts and Education are more of hypotactic elaboration than paratactic elaboration while the extension in the field of Technology and Education are more of paratactic extension than hypotactic extension. Also, the analysis of the identified semantic patterns shows that clarification, addition and conditional clauses are the dominant patterns of meaning found across the different fields of academic discourse. Clarification is used mostly in elaboration; additive is used mostly in extension, while causal conditional clause is used mostly in enhancement. In addition, the study shows that the dominant use of addition, clarification and clausal conditional has implications on the delivery of the lectures as they were deployed to organise and sequence information as well as provide the readers with the necessary circumstances for enhancing their understanding of the lectures. Discourse like inaugural Lectures generally adopt the use of explicit conjunction signals (e.g., or, but, and, if, because, etc.) as implicit signals (eg.: ; ') are seldom used to complement the explicit signals. Findings further indicate that the variability of the logico-semantic patterns found in each of the lectures had a great implication on the message of the lectures as the varied patterns are indicative of ideological variation and characteristic of each discipline. The study concludes that language, especially in the aspect of its logico-semantic relations of clause combination is sensitive to different contexts of academic disciplines and inaugural lectures are a site for identifying this sensitivity.

## Keywords

Logico-semantic relations, Clause combination, Inaugural Lectures

## INTRODUCTION

Language is a kind of semiotic system that is based on grammar and characterised by stratal organisation and functional diversity which combine to form a semiotic of higher-order consciousness and the basis for the human activity of creating meaning (Halliday and Webster 2009). This definition has three areas that are fundamental to this present study, which is 'stratal organisation', 'functional diversity' and 'the basis for the human activity of creating meaning'. The 'stratal organisation', and 'functional diversity' are used, in this definition, to refer to how words, phrases and clauses are organised to function in different ways to create a specific meaning.

It means that most expression in English is not written in isolation. Our conversations as humans are not built on independent clauses that are not related. This has long been discovered, although some scholars focused their analyses on the internal relationship within a clause rather than external, the relationship a clause has with other clauses (Halliday 1965; Morris & Hirst 1991). The major idea, here, is that since our conversation most times is made up of clauses that are coherently connected and related, clause combination is an important feature of language that needs to be studied. This is acknowledged in the Adaptive Approach to Grammar (Givón, 2002).

It has also been established that knowing the structure and function of combined clauses is part of the areas that are difficult to understand in grammar for English as a Second Language (ESL) students (Sjolie 2006). The structure of the English clause seems to be more complex in subordination; for instance, the SVO order of a sentence can switch to VSO in subordinate clauses such as in "I would have said something, had I been there". A study that was designed to investigate the educational development of native speakers has found that the knowledge of the patterns of clause combination is crucial for developing communicative competence appropriate for different genres and registers (Myhill 2009).

Several studies on logico-semantic relations have been carried out focusing on the English essays for ESL learners, abstracts of final project reports produced by the English Department Students, University Negeri Semarang (Rukmini 2010; Srinon and White 2011; Brisk and Rosa (2014); Farrokhi and Ghandkaran-Shotorban 2014; Sulistyaningrum and Rasyid 2015; Juniar 2018; Ngongo 2018; Allagbé et al. 2021).

More so, some other studies were mainly concerned with writings by EFL and native English speakers dwelling on the relationship between the uses of logical markers and proficiency in written or spoken English (Pan and Feng 2004; Deng 2006; Liu 2008; Wang 2023). Few studies have paid attention to logico-semantic patterns as important tools or indicators of accurate meaning delivery.

Inaugural lectures, on the other hand, are said to be derived from the Latin verb *augurare* ('to take omens') and so this first, formal speech by the new professor is intended also to give us a glimpse of what he or she might achieve in the future (Visser 2013). Inaugural lectures is a formal discourse of the highest academic attainment that are held very sacred in the Ivory Towers. According to Idowu (2017), an inaugural lecture is an intellectual inquiry into one or more identifiable problems of society in which a scholar may be operating and a kind of debt or academic obligation to a university community by a professor that ought to be delivered before a final disengagement from the institution. Visser sees Inaugural lectures as a central part of university academic life. These events are held to commemorate the inaugural lecturer's appointment to a full professorship. The inaugural lecture provides a platform for the academic to present the body of research that they have been focusing on during their career. The lecture also provides the writers with the opportunity to showcase their academics and share their research with members of the wider university community and the general public in an accessible way." According to Chikere (2020), the professorship chair was founded at the University of Oxford in 1862 and Professor Montagu Burrows was its first occupant. Also, in Nigeria, the first inaugural lecture took place at the University of Ibadan and was presented by Tekena N. Tamuno in 1973. It was entitled, "History and History-Makers in Modern Nigeria." Isaac 2024, in his search for a literature review discovered that inaugural lectures have not attracted much interest from academia despite their age and significance to the university system.

He also observed that the University of Ibadan, Obafemi Awolowo University and the University of Lagos are among the First Generation Universities that have a long-standing tradition of inaugural lectures in Nigeria.

Thus, this study finds Inaugural lectures very useful being a formal discourse of the highest academic attainment of professors who have attained the peak of their career and whose inaugural lectures are expected to be a celebration of scholarship. At this level of discourse, they should have had adequate knowledge of grammatical structures, most especially, the English clause.

This study investigates the uses of the logico-semantic relations of clause combination in selected inaugural lectures using three groups of features that are useful for the prediction of clause combination type: the frequency of predicates' participants and the presence of adjuncts. It examines the clause combination patterns and describes how these patterns are functionally used as tools for interpreting meaning, indicative of ideological variation.

## LOGICO-SEMANTICS

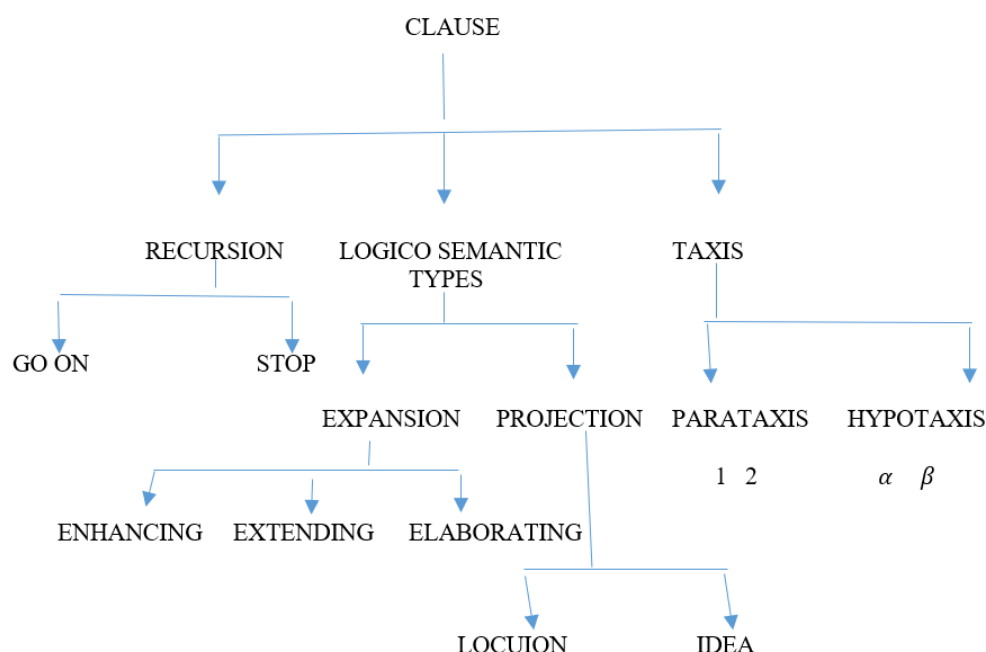
Logico-semantics represents the basic nature of the relationship between clauses and semantic motifs that run throughout the language as a whole, (Halliday, 1994; Halliday & Matthiessen, 1999; Halliday & Matthiessen, 2004). The logico-semantic system describes the specific type of meaning relationships between combined clauses and these meaning relationships are of two types according to Halliday 1994: Expansion and Projection.

Halliday and Matthiessen (2014) also map out the LOGICO-SEMANTIC TYPE system, which consists of two primary types, that is, expansion and projection, as shown in Fig. 1.

## SEMANTIC RELATIONSHIP

Traditional grammar has no terms for the overall semantic relationships held between clauses, although (as we shall see) the syntactic relations are traditionally established. Logico-semantics represents the basic nature of the relationship between clauses and semantic motifs that run throughout the language as a whole, (Halliday, 1994; Halliday and Matthiessen, 1999; Halliday and Matthiessen, 2004).

The logico-semantic system describes the specific type of meaning relationships between combined clauses. Halliday (1994 and 2004) and Gerot and Wignell (1994) argue that whereas taxis can be divided into parataxis and hypotaxis, the logico-semantic relationships are of two broad kinds: expansion (comprising extension, enhancement and elaboration) and projection (comprising locution and idea). Saragih (2008) postulates that logical meaning is a part of ideational meanings which is devoted to the clause complex hence logical function occurs in a clause complex.



**Fig. 1** The systems of clause complexing (Halliday and Matthiessen 2014:438)

### Expansion

Expansion involves three types of meanings where one clause enlarges or develops the other by one of the three following ways: elaborating (elaboration; relations of restatement or equivalence), extending (extension; relations of addition) or enhancing (enhancement; option of development) (Halliday and Matthiessen, 2004). Expansion relates phenomena as being of the same order of experience.

### Elaboration

Different terms have been used to refer to elaboration as a logico-semantic relation. They include 'explanation' (Kong, 2006 and van Leeuwen, 2005); 'exposition' (Martinec and Salway, 2005 and Unsworth, 2007); 'exemplification' (Kong, 2006; Martinec and Salway, 2005 and Unsworth, 2007); 'specification' (Djonov, 2005; Kong, 2006 and van Leeuwen, 2005). All these allude to elaboration as a logico-semantic relation; a relation in which a component is used to give more information or detail on a preceding component. A component is shifted in its degree of abstraction to make it more concrete, from more general to more specific. A component is elaborated by detailed description, exemplification, clarification, or restating (Opande 2017).

Elaboration means providing detailed information (relationship of restatement); and saying the same thing over again, either by direct repetition, or by rewording, clarifying, or giving an example. In clauses combined through elaboration, one clause expands another by elaborating in greater detail, by exemplifying or by clarifying in other words. In elaboration, the secondary clause gives more information to the information in the initial clause. According to Halliday (1994), the secondary clause does not introduce a new element into the picture but provides a further characterization of one that is already there. This is done by restating, clarifying, refining, or adding a descriptive attribute or comment. The equal sign (=) is used to denote this relation, which involves both parataxis and hypotaxis. Abrafi and Opoku (2017)

### Projection

Projection relates phenomena to phenomena of a higher order of experience (semantic phenomena—what people say and think)." (Halliday and Matthiessen 2004). According to the interdependency and logico-semantic relation, Halliday (1994) distinguishes ten basic relationships of absolute clauses. In hypotaxis, "the dominant element is free, but the dependent element is not"(Halliday 1994). In projection, the primary clause projects a locution or an idea.

#### Locution

This is quoted or reported speech. The symbol (") is used to signal Locution. The quoted or reported speech must be projected from a verbal process [please also note from the examples below that the (") symbol goes with the projected clause, not the projecting clause].

#### Idea

This is quoted or reported thought. The symbol (') is used to signal Idea. The quoted or reported thought must be projected from a mental process [again, note that (') is used only for the projected clause, not the projecting clause].

### CLAUSE COMBINATION

The concept of clause combination refers to the grammatical and semantic unit that is formed when two or more clauses are linked by tactic and logico-semantic relations Halliday and Matthiessen, (2014). Halliday refers to the concept as

clause complex while Downing (2006) terms the same concept as clause combination. In this study, both clause complex and clause combination will be used interchangeably.

Clause combination has obtained major awareness from linguists and language researchers. A number of work has been carried out in this area. Halliday (1994) argues that the concept of 'clause combination' thus enables us to account in full for the functional organization of sentences. Clause combination refers to the structural interdependency and semantic relationships of sentences that are of equal statuses or unequal statuses. It involves, first, the single clause and the combination of other clauses to make a conglomeration of clauses in a single grammatical and semantic unification. The grammar aspect which is not the main concern of this study is called taxis. This is of two types: parataxis and hypotaxis. The focus of this study, clause relations, is a semantic aspect which is also called logico-semantics.

### Clause Complex

The term clause complex seems to help to recover the phenomenon of clause combining from the constraints of written language and open the way to observe clause combination in spoken speech. It enables us to describe both the structural relations holding between the clauses and the logico-semantic relations that unite them Nguyen (2013). Halliday refers to the concept as clause complex while Angela Downing terms the same concept as clause combination. In this study, both clause complex and clause combination will be used interchangeably

The term, clause complex or clause combination, refers to the grammatical and semantic unit formed when two or more clauses are linked by tactic and logico-semantic relations Halliday and Matthiessen, (2014)

Clause complexing cannot be achieved with disregard to cohesion - the way sentences, written or spoken, are bound together in forming a text that has meaning (Finch, 2000; Halliday & Hassan 1976). According to Barongo (1996), dependency is the paramount aspect in cohesion. An aspect in a text must depend on another one so as to enable cohesion. Salkie (1995) asserts that reference, contrast, ellipsis and conjunction enable cohesion in texts. Halliday and Hasan (1976) identify reference, representation, substitution, ellipsis, conjunction and lexical ties as constructions that enable cohesion in texts.

### EMPIRICAL REVIEW

Several scholars have worked on logico-semantic relations in the aspect of spoken English, focusing on spoken English fluency, accuracy and complexity (Zhang and Wu 2001; Zhou 2002; Polat and Kim 2014; Yu 2020; Yu, Peng and Zhou 2022; Liu and Ming 2020), as well as vocabulary (Zhen 2005; Wen 2006) as well as spoken chunks in English (Xu and Xu 2007; Zhang 2004; Qi 2010; Ding and Qi 2011).

Moreover, in the aspect of written English, Rukmini (2010) analyzed the logico-semantic relation of clauses complexes in the abstracts of the final project reports produced by the English Department Students of Semarang State University. She found that the clause complexes made in the abstracts were of both parataxis and hypotaxis relation. The logico-semantic relations that were prevalent included elaboration, extension, enhancement and idea, while the locution projection was not found at all. Srinon and White (2011) analysed Thai university students' essays in a longitudinal genre-based course at a Thai government university in 2007. In this study, the researcher demonstrated how selected students presented their clause complexity which is related to, for example, inter-clausal relations (logico-semantic relation), coordination (parataxis) and subordination (hypotaxis). The results of the analyses indicated that the selected students showed a positive trend of developments in the use of semantic relations in their later texts. They included rich conjunctive relations and lexical resources in their later texts compared to the pre-test texts.

Brisk and Rosa (2014) did research on the emergence of logico-semantic relations in children's written language focusing on additive extension and enhancement relations. They realised that initially, connected clauses followed a temporal organization following the order of things in the world and that the default connective used was either temporal or causal. Temporal enhancement relations appeared first, followed by reason, condition, place, purpose, manner, and concession. They further found out that in early childhood, written clauses are often singular or joined by additive connectives. Temporal clauses were usually the first dependent clauses to be used and were often in a marked Theme position in the sentence. Brisk and Rosa realised that students made numerous attempts at using clause-complexes in their writing and that the types of relations varied about the particular genres the students were encouraged to write. Performance differed depending on the grade level and genre.

Sulistyaningrum and Rasyid (2015) investigated the kinds of taxis and logico-semantic relation of students' presentations in the Acceleration Program of SMA Labschool Jakarta. They analysed the meanings represented in clause complexes based on the concept of the relationship between clauses suggested by Halliday (1994). In their study, it was observed that the clause complexity in the acceleration students' presentation was varied. In the first group consisting of 4 female students, almost all kinds of taxis and logico-semantic relations were found in their presentation, except hypotactic extension. In correspondence with the first group, the second group consisting 4 male students, produced all kinds of relation except locution. From all groups, the type of taxis and logico-semantic relation that mostly arose was paratactic elaboration. Their analysis of meaning revealed that the dominant meaning was addition which appeared from extension.

The studies presented above lay a basis for research on logico-semantic relations. However, this study is concerned with the fact that they generally investigated all relations, taxis and logico-semantic dwelling on abstracts of the final project reports, university students' essays, children's written language, students' presentations in Acceleration Program, hence paying little or no attention to expansion and projection in an academic discourse like inaugural lectures.



This study departs from the studies above by investigating data from Inaugural lectures selected from different disciplines, which, according to the researcher's knowledge, has received little research attention in the area of logico-semantic relations.

Adjei, A.A.& Opoku, K.(2017) also carried out a study on the expansion relations of clause complexes in editorials of a Ghanaian daily newspaper where they focus on elaboration, extension and enhancement relations of clause complexes in the editorials, and the realization of those clause complexes through the use of conjunctive signals in the lexico-grammar. The theory of systemic functional grammar which says that the expansion can be of three kinds elaboration, extension and enhancement; suggested by Halliday (1994; 2004; 2014) underlies the discussion. The article adopts a qualitative approach as it textually investigates ten (10) purposively sampled editorials from the Daily Graphic. The results reveal that the clause complexes are of elaboration, extension and enhancement. On the whole, enhancement is highly used followed by elaboration and extension. To them, the text was mainly organized to give more information, rather than an explanation by restating information in other ways. This seems to be a typical feature of editorials.

Setial, E, et al (2011) carried out a study on Clause complex and experiential realization in court texts (Bali Bomb Case I). It shows that court texts favor much more parataxis than hypotaxis. The scale of priority of the needs of taxis (expansion and projection) can be determined from T1 to T11. Expansion clauses can be grouped into three types, i.e. (1) elaboration, (2) extension, and (3) enhancement. From the whole text, only T4 favors complete expansion in the two taxis (paratactic and hypotactic elaboration, extension, and enhancement. The study uses more paratactic elaboration and hypotactic extension. From the results of the analysis, there are only six texts that use projection clauses. Only some data of projections are found in the analysis. The study uses more of hypotactic locution than paratactic

Yanuar 2013 carried out research on the analysis of clause complexity in English textbooks written by native and non-native speakers. The purpose of the research is to find out the kind of taxis and Logico-semantic relations that are used in English textbooks written by native and non-native speakers and to find out how the clause complex is used in English textbooks written by native and non-native speakers. Based on the analysis of the data, it was found that the kinds of taxis in the English textbooks written by native and non-native speakers are paratactic and hypotactic. Meanwhile, the kind of Logico-semantic relation that is used in the English textbooks written by native and non-native speakers are expansion and projection. From the data, hypotactic is more used than paratactic while on the other hand, in expansion, enhancement is more used followed by extension but in projection, locution is more used than idea.

This present study does not focus on Newspaper editorials or comparative analysis as Eko did on English textbooks written by native and non-native speakers, neither does it hope to find out the grammatical constructions in court text like the study carried out by Setial. But aims at determining the patterns of meaning-making of logico-semantics relations in inaugural lectures and the reasons for the patterns, hoping that it can contribute to existing knowledge of logico-semantics and provide insights into pedagogical implications for teaching written/ spoken English in Nigeria. It will also give an analysis of the differences in use across the various disciplines of the six inaugural lectures selected for the study.

## METHODOLOGY

The study employed a multistage sampling technique. The first stage comprises the selection of Osun, Oyo and Lagos State using purposive sampling technic, These states were selected because it houses the first generation universities in southwestern Nigeria(Isaac 2024). The second stage involves the selection of one federal university from the state selected using a purposive sampling technique. The third stage involves the selection of two inaugural lectures from the selected federal universities using simple random sampling technique. Thus six inaugural lecture materials were used for the study. The primary and secondary data were used for the study. The primary data comprised samples of inaugural lectures collected from three Federal Universities in Southwestern Nigeria: Obafemi Awolowo University, University of Ibadan and University of Lagos. The secondary data were sourced from textbooks, journal articles and the Internet. The data collected were analysed using Halliday's theory of Systemic Functional Grammar.

## FINDINGS AND DISCUSSION

The data for this study was generated from inaugural lectures that cover different and major disciplines in Nigerian universities. After identifying the dominant clause combination types and reoccurring patterns, an attempt was made to interpret and discuss the findings with a view to bringing out the various ways the patterns are used to indicate ideological variation and contextual sensitivity. The findings of the dominant clause combination types are presented below in Table 1-4 starting from expansion and projection and their subtypes.

Table 1 below shows the frequencies of expansion and projection in each of the six inaugural lectures. The table also presents an overview of the combination of both expansion and projection in the six inaugural lectures. As shown in Table 1, there were 1571 occurrences of expansion and projection in the six inaugural lectures; Lect-A(Science), Lect-B(Medical science), Lect-C(Technology), Lect-D(Social Science), Lect-E(Arts), Lect-F(Education). Out of this number, there were 172(11.4%) instances of expansion in Lect-A, 263 (17.5%) in Lect-B, 249 (16.5%) in Lect-C, 270(17.9%) in Lect-D, 479(31.8%) in Lect-E and 73(4.9%) in Lect-F. This indicates that expansion is used more in Lect-E(Arts)than in the other lectures, as the percentage in each of the other lectures is almost twice the percentage of Lect-E.

**Table 1** Frequency of occurrences of *expansion* and *projection* in each of the six inaugural lectures

The Six Inaugural Lectures	No of occurrence of <i>expansion</i>		No of occurrence of <i>projection</i>		Overview of <i>expansion</i> and <i>projection</i>	
		%		%		%
Lect-A	172	11.4%	4	6.1%	176	11.2%
Lect-B	263	17.5%	9	13.6%	272	17.3%
Lect-C	249	16.5%	5	7.6%	254	16.2%
Lect-D	270	17.9%	28	42.4%	298	18.9%
Lect-E	479	31.8%	19	28.8%	498	31.7%
Lect-F	73	4.9%	1	1.5%	73	4.7%
Total	1506	100%	66	100%	1571	100%

A critical assessment of the table also shows that the percentages of Lect-B(Medical Science), Lect-C(Technology), and Lect-D(Social Science), fall within the same range of 16%-18%. This is to say that expansion is used almost in the same frequency in the three lectures. Expansion in Lect-F(Education) accounts for 4.9% out of all the occurrences of the other five lectures. This, to some extent, shows a variation in terms of frequency between Lect-F and the other five lectures. This is to say that Lect-F has the lowest frequency of expansion out of all the lectures.

Contrary to the appreciably high occurrence of expansion in the data, Table 1 shows that a total of 66 instances of projection were identified in the six lectures. Out of this total number, there were 28 occurrences of projection in Lect-D which accounts for 42.4%, while there were 4(6.1%) in Lect-A, 9 (13.6%) in Lect-B, 5 (7.6%) in Lect-C, 19 (28.8%) in Lect-E, 1 (1.5%) in Lect-F. It is clear therefore that the percentage of projection in Lect-D is more than the combination of the percentages of Lect-A, Lect-B, Lect-C and Lect-F. Only Lect-E has a percentage that is close to Lect-D. What can be deduced from this is that, in terms of frequency, there is also an overwhelming degree of variability in the use of projection in the six Lectures. Thus, more of projection is used in Lect-D than in the other 5 lectures and again, Lect-F has the lowest frequency occurrences of projection used out of all the lectures.

Table 1 also shows an overview of the combination of both expansion and projection in the six lectures. The table shows that the total occurrence of the combination of both expansion and projection in the data was 1571; out of which there were instances in Lect-A 176(11.2%), Lec-B 272(17.3%), Lect-C 254(16.2%), Lect-D 298(18.9%), Lect-E 498(31.7%), Lect-F 73(4.7%).The percentages of the combination of both expansion and projection are similar in four of the lectures(lect-A, lect-B, lect-C and lect-D) as the percentages are not far apart. For instance, the percentage of the combination of both expansion and projection in each of the four lectures is above 10% and less than 20%. These observed similar percentages of the combination of both expansion and projection clauses in lect-A to lect-D seem to suggest a uniform syntactic disposition across the six lectures under study. Based on these realities, it could be argued that logico-semantic patterns especially the one used in inaugural lectures around the federal universities in Southwestern Nigeria, to some extent, share certain structural characteristics.

### Elaboration, extension and enhancement (i.e. types of Expansion) in each of the six lectures

**Table 2** Occurrences of elaboration, extension and enhancement in each of the six lectures

The Six Inaugural Lectures	Frequency of elaboration(=)		Total	%	Frequency of extension(+)		Total	%	Frequency of enhancement (×)		Total	%
	Para Taxis	Hypo Taxis			Para Taxis	Hypo Taxis			Para Taxis	Hypo Taxis		
Lect-A	6	47	53	10.4%	68	12	80	12.4%	1	38	39	11.1%
Lect-B	0	93	94	18.5%	99	28	127	19.8%	1	41	42	11.9%
Lect-C	3	44	47	9.2%	146	0	146	22.7%	1	55	56	15.9%
Lect-D	0	113	113	22.2%	46	36	82	12.8%	1	74	75	21.2%
Lect-E	6	173	179	35.2%	123	60	183	28.5%	1	116	117	33.1%
Lect-F	2	21	23	4.5%	21	4	25	3.8	0	24	24	6.8%
Total	17	492	509	100%	503	140	643	100%	5	348	353	100%

From Table 2 above, it is evident that the lecturers used all the subtypes of expansion in their presentation of information. It is obvious that extension was used extensively by the authors of the six lectures. Looking at the table, one can draw some remarks as follows: The most frequent use of expansion is extension with 643 clause complexes accounting for 42.7%, followed by elaboration with 509 clause complexes representing 33.8 %, and the lowest frequency, enhancement, with 353 clause complexes, occupying 23.5%. This means that each of the six lectures is mainly organised first to add new information, and second explanation by restating information. This seems to be a typical feature of inaugural lectures.

Furthermore, focusing first on the elaboration, there were 53(10.4%) instances of elaboration in lect-A, 94(18.5%) in lect-B, 47(9.2%) in lecture-C, 113(22.2%) in lect-D, 179(35.2%) in lect-E, 23(4.5%) in lect-F. Lect-E has the highest occurrence of elaboration, followed by lect-D, and lect-B while lect-A and lect-C have similar occurrences

and lect-F has the lowest occurrence. On the use of extension, lect-E has the highest number of usage as it had 183(28.5%) occurrences followed by 146(22.7%) lect-C, 127(19.8%) lect-B while 80(12.4%) lect-A and 82(12.8%) lect-D has almost the same frequency and 25(3.8%) lect-F has the lowest occurrence. Considering the third expansion type which is an enhancement, there were 117(33.1%) in lect-E which happened to have the highest occurrence again, followed by 75(21.2%) in lect-D, 56(15.9%) in lect-C and 39(11.1%) in lect-A, 42(11.9%) in lect-B having similar occurrence while 24(6.8%) in lect-F has the lowest occurrences. It is clear from this that lect-E has the highest frequency while lect-F has the lowest frequency of expansion types in the data. This also shows a variation in the use of expansion in the six inaugural lectures under study. In this analysis, there is no doubt that elaboration and extension are the most frequently used expansion types across the six lectures while enhancement is the least used. This is not the case in lect-C and lect-F where extension and enhancement are the most frequent while elaboration is the least used. However, in the total analysis, elaboration and extension are the most frequently used in the data under study.

Furthermore, in Table 2 above, each expansion type is classified into paratactic and hypotactic clauses. From this, it was observed that paratactic elaboration has 17 occurrences while hypotactic elaboration has 492 occurrences. Also, paratactic extension has 503 while hypotactic extension has 140 occurrences. And thirdly, paratactic enhancement has 5 occurrences while hypotactic enhancement has 348 occurrences. It is clear from this that in elaboration and enhancement, hypotactic clauses are highly used more than paratactic since the occurrence of hypotactic elaboration and enhancement is more than twenty times the occurrence of their paratactic. This is not the case in extension. In extension, paratactic has 503 occurrences while hypotactic has 140 occurrences. This means that extension paratactic is more used than hypotactic since the occurrence of paratactic extension is more than hypotactic in all the lectures. In the general analysis, hypotactic is more used in the data than paratactic. This could be because the lectures are meant to be understood or comprehended easily by the listener or readers. Thus, this confirms Halliday and Matthiessen's (2014: 520) claim that the function of tactic relations is "But the idealized function of the paratactic structure is to represent the wording; whereas with hypotaxis the idealized function is to represent the sense or gist." Hypotaxis requires the reader to pay more attention to comprehend the text's meaning than parataxis.

### Locution and Idea in Each of the Six Lectures

In the table below (Table 3), we present the occurrences of the locution and idea in each of the six inaugural lectures that this study focuses on.

**Table 3** Occurrences of locution and idea in each of the six lectures

The Six Inaugural Lectures	Frequency of locution	%	Frequency of idea	%
Lect-A	4	8.7%	0	0
Lect-B	3	6.5%	6	30%
Lect-C	5	10.9%	0	0
Lect-D	23	50%	5	25%
Lect-E	10	21.7%	9	45%
Lect-F	1	2.2%	0	0
Total	46	100%	20	100%

Table 3 shows the frequency of locution and idea in each of the six lectures under study. It is evident from the table that there were 46 instances of locution and 20 idea in all the data. Regarding the use of locution across the lectures, lect-D had the dominant use of locution as it accounts for 23(50%) occurrences while lect-F had the lowest use as it accounts for 1 (2.2%). Occurrences in other lectures include; 4(8.7%) in lect-A, 3(6.5%) in lect-B, 5(10.9%) in lect-C and 10(21.7%) in lect-E. Thus lect-D is unique in this regard as the percentage of locution in lect-D(50%) is equal to the percentage of all the other lectures put together.

On the other hand, idea in lect-E had 9(45%) which was the highest frequency followed by lect-B which had 6(30%) occurrences and lect-D 5(25%) while lect-A, lect-C and lect-F had 0(0%) occurrence. As low as the occurrence of ideas is in the six lectures, the percentage of idea in lect-E is more than the percentage of lect-D and lect-B. It means that lect-E(Arts) has the highest occurrence of idea in all the six lectures. This also reflects a degree of variability in the use of projection in the six lectures.

**Table 4:** Occurrences of locution and idea in each of the six lectures

The Six Inaugural Lectures	Frequency of locution	%	Frequency of idea	%
Lect-A	4	8.7%	0	0
Lect-B	3	6.5%	6	30%
Lect-C	5	10.9%	0	0
Lect-D	23	50%	5	25%
Lect-E	10	21.7%	9	45%
Lect-F	1	2.2%	0	0
Total	46	100%	20	100%

Table 4 shows the frequency of locution and idea in each of the six lectures under study. It is evident from the table that there were 46 instances of locution and 20 idea in all the data.

Regarding the use of locution across the lectures, lect-D had the dominant use as it accounts for 23 (50%) occurrences while lect-F had the lowest use as it accounts for 1 (2.2%). Occurrences in other lectures include; 4 (8.7%) in lect-A, 3(6.5%) in lect-B, 5 (10.9%) in lect-C and 10 (21.7%) in lect-E. Thus lect-D is unique in this regard as the percentage of locution in lect-D(50%) is equal to the percentage of all the other lectures put together.

On the other hand, idea in lect-E had 9 (45%) which was the highest frequency followed by lect-B which had 6(30%) occurrences and lect-D 5 (25%) while lect-A, lect-C and lect-F had 0(0%) occurrence. As low as the occurrences of idea are in the six lectures, the percentage of idea in lect-E is more than the percentage of lect-D and lect-B. It means that lect-E has the highest occurrence of idea in all the six lectures. This also reflects a degree of variability in the use of projection in the six lectures.

## Summary

The patterns of meaning identified in this study were discussed from three perspectives;

1. Logical relationship of clauses in the non-simple sentences. These were grouped into:
  - a. Dependent elaboration (signaled by  $=\beta$ )
  - b. Dependent extension (signaled by  $+\beta$ )
  - c. Dependent enhancement (signaled by  $x\beta$ )
  - d. Dependent speech (signaled by " $\beta$ ")
  - e. Dependent thought (signaled by ' $\beta$ ')
  - f. Independent elaboration (signaled by  $=2$ )
  - g. Independent extension (signaled by  $+2$ )
  - h. Independent enhancement (signaled by  $x2$ )
  - i. Independent speech (signaled by " $2$ ")
  - j. Independent thought (signaled by ' $2$ ')
2. Semantic implications of combined clauses in the non-simple sentences. These were grouped into:
  - Expository elaboration
  - Exemplifying elaboration
  - Clarifying elaboration
  - Additive extension
  - Variation extension
  - Alternating extension
  - Temporal Enhancement
  - Spatial Enhancement
  - Conditional Enhancement
  - Comparison Enhancement
  - Direct speech
  - Direct thought
  - Indirect speech
  - Indirect thought
3. Clausal connecting devices are found in the non-simple sentences. These were grouped into:
  - Explicit clause binders
  - Explicit clause linkers
  - Implicit clause connectors

In our analysis, in terms of the logical relationship of clauses in the non-simple sentences, we have found out that there were more of hypotactic constructions to ensure that the second clause is made to be dependent on the first clause and these have been achieved through;

elaborating the meaning of the first clause(e.g. She told me /  $=\beta$  that they were on an official visit to my university)

extending the meaning of the first clause(e.g.  $\alpha$  The percentage leaf litter contribution to annual litter fall decrease from 91.3% in 1990 to 65.6% in 1997-1998 /  $+\beta$  while those of wood and reproductive litter increased)

enhancing the meaning of the first clause(e.g.  $\alpha$  Most tropical forest vegetation thrives on poor soil/  $x\beta$  because the forest literally feeds on itself)

Although clauses expanded through extending the meaning of the first clause across the six lectures have a higher usage of paratactic constructions. Also, the findings showed that in terms of semantic implications of the combined clauses, clarification, addition and causal conditional were the dominant patterns of meaning found across the six lectures. For illustration, instances from the data are; clarification ( $\alpha$  The low decomposition rates of cacao and kola nut litter reflects the high accumulation of litter on these plantation floors,/  $=\beta$  which is a common sight especially in cacao plantations during the dry season), addition (1Alcohol is a very common chemical in today's society //  $+2$  and has been around for thousands of years) and causal conditional( $\alpha$  Most tropical forest vegetation thrives on poor soil/  $x\beta$  because the forest literally feeds on itself). More so, from the view of the clausal connecting devices found in the non-simple sentences, it was observed that the use of explicit clause binders (because, when, if ) was many in each of the six lectures



followed by explicit clause linkers (and, or, but) while implicit(, ; :) clause connectors used were few and mostly used as a complement to the explicit clause connectors or signals.

Furthermore, findings showed that, in terms of frequency of occurrence, inaugural lectures from the Faculty of Arts have the highest frequency of occurrences of expansion followed by Medical Sciences, Technology, and Social Sciences while Education has the lowest number of occurrences. On the other hand, the projection has more instances in Social Sciences than in Medical Sciences, Technology, Sciences, Arts and Education. Therefore, the use of expansion and projection in the six lectures varies overwhelmingly in terms of frequencies of occurrence.

Thus, the findings from the study can be summarised as follows:

- a. The use of expansion and projection in the six lectures varies overwhelmingly in terms of frequency of occurrences.
- b. Expansion is preferred to projection in inaugural lectures from Sciences, Medical Sciences, Technology, Social Sciences, Arts, and Education.
- c. Arts has the highest frequency of occurrence of expansion and the expansion types (i.e. elaboration, extension, and enhancement) but Medical Sciences, Technology and Social Sciences have the same number of occurrences, while Education has the lowest.
- d. The dominant expansion types in Technology and Education are extension and enhancement while in Sciences, Medical Sciences, Arts and Education are extension and elaboration.
- e. In elaboration and enhancement, hypotactic clauses have a higher number of usage than paratactic but in extension, paratactic has a higher number of usage than hypotactic.
- f. Clarification is used mostly in elaboration; additive is used mostly in extension, while causal conditional is used mostly in enhancement.
- g. Projection has a higher usage in Social Sciences than in Medical Sciences, Technology, Sciences, Arts and Education.
- h. Locution is the most frequent projection type in the six lectures.
- i. In the six lectures, idea as a type of projecting has a smaller number of usage than other types.
- j. The structural patterns of the identified clauses are similar in the six lectures.
- k. Explicit conjunction signals have a higher number of usage than implicit conjunction signals in all the expansion types (elaboration, extension, enhancement).
- l. Generally, expansion and projection use more hypotactic than paratactic clauses.
- m. Locution and idea use more of reported speech/ thought than quoted speech/ thought.

## CONCLUSION

So far, logico-semantic relations in the six lectures taken from the Sciences, Social Sciences, Medical Sciences, Arts, Education and Technology have been investigated thoroughly. It can be said that the aim of the analysis has been achieved. Some of the features of the genre and the intention of the authors have been discovered through the study.

Therefore, it concluded that the dominant use of addition, clarification and clausal conditional indicated that the lectures were not only organised to give new information but also took the time to explain, describe and provide the reader with the necessary circumstantial information to facilitate understanding of the sequence of events in the lectures.

It also concluded that hypotactic relations have been used more frequently than paratactic ones in the six lectures to logically connect events and ideas, thereby providing readers with an easy understanding of the central theme of the discourse. Thus, this finding confirms Eggins' (2004) claim that,

Hypotaxis is generally more common in written text because dependency relations require more care by the writer to construct and more effort by readers to interpret than parataxis. The hierarchic organization of information demanded by hypotaxis also offers the writer a resource for offering readers a more closely controlled logic between events.

Also, Halliday and Matthiessen (2014) mention the functions of tactic relations by saying that "the idealized function of the paratactic structure is to represent the wording; whereas with hypotaxis the idealized function is to represent the sense or gist." Hypotaxis requires the reader to pay more attention to comprehend the text's meaning than parataxis. Furthermore, since the structural patterns of expansion and projection are similar in the six lectures, it could also be concluded that there is a structural similarity in the use of expansion and projection across the six lectures.

Therefore, one could say that the writers of these academic discourse (inaugural lectures) pay keen attention to the logical relationship and semantic implications of the combined clauses in these lectures through the skillful use of the connecting devices that help to build up ideas and messages being communicated to the reader to achieve cohesion and clarity. Thus, the fact that there is an overwhelming degree of variability in the use of expansion and projection in the six lectures, suggests that there is, to some extent, an ideological variation in the use of expansion and projection in the selected disciplines.

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