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LOGICAL FUNCTION ANALYSIS IN JAKARTA POST NEWSPAPER OF EDITORIAL AND NEWS TEXT

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Abstract

Logical Function is a function related to the logical relationship between one clause and another, including two aspects, namely interdependency relations and logico-semantic relations. This study demonstrated the clause complexity of the transcript of two different texts with a similar subject matter, news and editorial text from the Jakarta Post Newspaper, such as, logical function, coordination (parataxis) and subordination (hypotaxis). The method of this study highlighted the analysis of qualitative research on the issue of clause complexity based on the perspective of Systemic Functional Linguistics (SFL) in the two different texts. SFL allows the analyst to shed light on interaction with the social context to imbue texts with the meanings expressed. The results of the study show that taxis in logical function analysis of News and Editorial Text apply two taxis, they are parataxis and hypotaxis. Hypotaxis is dominantly used in both text, 85.71% in Editorial and 89.65% in News. The proportion of the dominant hypotaxis in News text was 37.93% and in Editorial 33.33%.

Keywords: hypotaxis; logical function; parataxis, SFL

1. Introduction

For centuries, newspapers have delivered news to the reading public, informing them of important events of the day. Since its daily format became widespread in the early 19th century, newspapers have delivered first-instance news on a daily news cycle: Whatever happened on a given day, its news was printed in the paper and delivered to readers' doorsteps the following day (Takinawa, 2017). The information in newspaper can be published in different kinds of news including news reports, featured articles, and news editorials (Danesi, 2009; Reitz, 2004). Each kind has its own communicative purposes. For instance, news story aims to present a short report of new information and current events, while featured articles represent the depth information of specific events, subjects, or people. Unlike the prior kinds, news editorials publicize editors' views discussing issues related to social interests such as politics, culture, and social issues (Danesi, 2009). Since different kinds of news contain different communicative purposes, the discourse used in news seems to be different as well.

Systemic functional linguistics (SFL) (Halliday & Matthiessen, 2004) is a linguistic theory which allows the analyst to shed light on just how it is these choices interact with the social context to imbue texts with the meanings that are expressed. One of the main assumptions of SFL is that language serves three main purposes: the experiential (or ideational), through which language users express their view of the world; the interpersonal,

through which language users establish and maintain social contact; and the textual, which allows for the first two to be brought together and organized in a way that is communicatively effective. Relation of SFL towards newspapers acts as an alternative approach for analyzing the discourse in linguistics. In other kinds of texts in newspapers, events that take place out there in the "real" world are expressed through the linguistic choices that reporters and editorialists make. Events are reconstructed as text through discourse. This reconstruction involves linguistic choices at many turns and levels in the unfolding of the discourse.

Halliday's SFL (Halliday & Matthiessen, 2004), emphasizing on semiotics, the code of language and the utterances and texts specify all the meaning potentials, studying the functional and situational organization of language in the social context in the interpretation of compound clause. Halliday (2014) has introduced the component of function as the logical component. Grammar as a theory for representing human experience, roles and relations in SFL is a meaning-making resource through networks of mood, topic, and logic with their diverse functions. It is also lexicogrammatical for it acts as the central processing of meanings through wordings (Martin, 2009). The component of logical function is the meaning in functional semantics among clauses which form the logic of natural language. Logical Function deals with the relationship between ideas in complex (compound) clauses.

This research only discusses logical functions which are part of an ideational function, a function where language is used to understand and express the speaker's perception of the world and to his consciousness. In a logical function there are two aspects that will be discussed, namely interdependency relations and logico-semantic relations. For this analysis, the researchers have chosen two different texts with a similar subject matter, news of "Five Foreigners Arrested in Bali Drug Sweep" and an editorial text, "Good Job Jakarta" from the Jakarta Post Newspaper, published on September 1, 2018 and December 13, 2018.

2. Literature Review

This study is based on SFL theories developed by Halliday (2014). SFL is a linguistic theory, and according to Almurashi (2016), the difference between SFL and other linguistics system is that SFL has its distinctive respect (Almurashi, 2016, p.71). SFL studies not only the structure but also examines its social context. Systemic Functional Grammar (SFG) is a part of Systemic Functional Linguistics (SFL) concerned with the study of linguistic forms in relation to the meanings that they express.

Functional grammar refers to an approach to language on the principle of the roles or functions played by language or the functions are given by human beings to language in their life as social being (Saragih, 2006). All types of grammar can be classified into two categories, namely logical-philosophical or known as formal grammar and ethnographic-descriptive or known as functional grammar. SFG, put forward by Halliday (Halliday & Matthiessen 2004), also pays great attention to how the speakers generate utterances and texts to convey their intended meanings. According to SFG, language has three metafunctions, namely, the ideational, interpersonal, and textual metafunctions. A brief description of the SFL theories related to projection is presented in the following subsections.

Logical Functions are concerned with the relationships among ideas in complex (compound) clauses. The logical function relates to the kinds of connections that we make between the messages. The logical function enables us to produce more complex configurations in which two or more clauses are joined into a larger whole, (Thompson,

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2014). The component of logical function is the meaning in functional semantics among clauses which form the logic of natural language.

Logical Functions focuses on how clauses are connected to each other i.e. interdependency between clauses and type of meaning relationship between them (Eggins, 2004: 258). According to Adha (2018), his research only discusses logical functions which are part of an ideational function, a function where language is used to understand and express the speaker's perception of his world and to his consciousness. He analyzed the complex sentences with using logical function. Meanwhile, Ifadloh & Nufus (2017) researched about the students' ability to analyze clause complexity based on the perspective of Systemic Functional Linguistics (SFL). They explained the demonstrated the clause complexity of the transcript of the students' conversation which was related to, for example, inter-clausal relations (logico-semantic relation), coordination (parataxis) and subordination (hypotaxis).

Interdependence relations are also known as the term taxis which consist of parataxis or equivalent compound sentences and hypotaxis or multilevel compound sentences. Meanwhile, logico-semantic relations are related to the relationships of meaning between clauses in complex clauses. The logico-semantic relation consists of two parts, namely:

- 1. Expansion is a relationship between clauses where the main clause is extended by another clause, consisting of:
 - a. Elaboration (=)
 - b. Extensions (+)
 - c. Enhancements (x)
- 2. Projection is a relationship between clauses where the main clause is a project for another clause, consisting of:
 - a. Locution (")
 - b. Idea (')

Interdependency Relation

The technical term of "clause" in SFL is identical with 'sentence' in the formal grammar. In SFL (Halliday 2005: 262) clause complex is a part of clause. Interdependency of clauses is technically called "taxis". The same interdependency is called parataxis (equal status) and the different one is called hypotaxis (unequal status).

Parataxis is the relation between two-like-elements of equal status, one initiating and the other continuing. Parataxis is common in conversation, as illustrated in this passage written by an author noted for his ability to capture contemporary speech. Hypotaxis, on the other hand, assigns order and structure to the clauses and establishes a level of importance to each clause in the sentence. This also gives the reader clue as to what they should be focusing on. Connections are explicitly drawn, without one clause the other wouldn't make sense. Therefore, these clauses are dependent on one another.

The distinction between parataxis (using 1,2, etc) and hypotaxis (using α , β) has developed as a powerful grammatical strategy for guiding the rhetorical development of text. The choice between parataxis and hypotaxis characterizes each relation between two clauses within a clause complex, and clause complexes are often formed out of mixture of parataxis and hypotaxis.

Logical Dependency Relation

It has already come across the two possible types of logical dependency: dependence or equality, or, in Halliday & Matthiessen's (2014: 440) termed, hypotaxis and parataxis. In

the following example, where two friends are discussing precious stones in Brazil, we have two paratactic (equal) clauses:

Why does he start lately // and you cannot warn him

1
2

Reported clauses also can be analyzed in terms of parataxis and hypotaxis: in the most straightforward cases, a reporting clause and a quote are equal in status, whereas a reported clause is dependent on the reporting clause:

He said // oh no he buy wrong paper's type 1 2 I asked / how many tools you need
$$\alpha$$
 β

Embedded clauses do not form clause complexes, since they function as constituents in other clauses; and therefore, the categories of hypotaxis and parataxis do not apply to them as a whole (although there may be hypotaxis and parataxis within the embedding – i.e. an embedded clause complex). However, they do play a part in the analysis of clause complexes, if only because they need to be identified so that they can be assigned to their appropriate role. Halliday & Matthiessen (2014: 382) suggest using [[]] to mark embedded clauses if necessary. Here are two examples marked in this way: the first is a single clause with an embedded finite clause, and the second is a clause complex with an embedded clause complex consisting of two nonfinite clauses:

Henry James said / that the Dean has the authority duties $\alpha \hspace{1cm} \beta$ [[to do the project, / fortunately by targeting first-time buyers]] /// $[[\alpha \hspace{1cm} \beta]]$

Logico-Semantic Relations

The first distinction that Halliday & Matthiessen (2014, Section: 7.2.2) propose in order to allow a pattern to emerge is between two basic types of relationships which function in very different ways: expansion and projection. In expansion, one clause expands on the meaning of another in various ways – for example, the first clause below adds specification concerning the location in time of the process in the second, dominant, clause.

Projection only appears in complex clauses, which at least occur from two clauses, namely the projection clause and the projected clause. In the text of the complex clause, the projection clause is authorities said and the clause they will apply the rules is the projected clause.

	Expansion	Projection
Paratactic	They are not hairdressers, //	they are funeral directors
Hypotactic	If you get the problem,/ we'll solve it	A top official denied / that the
Embedded	It depicts a little boat [[sailing	through stormy seas]]

Table 1. The Projection of Clause

Expansion

Within the relationship by which one clause expands another, Halliday & Matthiessen (2014) identify three broad semantic groupings: elaboration, extension and enhancement.

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The central examples of each are fairly easy to identify, but — as always — there are borderline cases that are more difficult to pin down, not least because the same conjunction may be used to signal different semantic relations, or there may be no explicit signal.

a) Elaboration

An elaborating clause does not add any essentially new element to the message, but gives more information about what is already there. It may relate to the whole messages, or just to one part of the message; and it may restate it; or it may clarify or exemplify it; or it may add extra information about its attributes, including the speaker's comment.

To illustrate the use of the analytical conventions introduced above, these examples Could be labeled as follows:

I've had no nastiness // everyone's been fabulous

1 =2

The 2018 Asian Games, cohosted this year by Jakarta, //has eased the city's

χ =β

notorious traffic congestion/ //which stood at 619,/ 212 vehicles

β

b) Extension

If one clause extends another, it adds to it by simple addition (the 'and' relation), or by replacement (the 'or' relation). Note that, in one of its meanings at least, 'but' can be included under the 'and' relation – see the example below; and the 'or' relation has two aspects: replacive and alternative. (Labelling the relations 'and' and 'or', as I have done here, is only a convenience: these do not have to be the conjunctions that signal the relations, even with parataxis.) The suggested notation symbol is '+' ('added to').

I gave my sister surprise// and I gave my brother a reasonable understanding

+

if she hasn't arrived by ten, / I'm leaving

+β

c) Enhancement

Enhancement is the most varied of the categories of expansion, covering conjunctive relations such as time, cause, reason, condition and concession. The suggested notation symbol is 'x' ('multiplied by').

Here are a few examples – you might like to consider whether an equivalent non-clausal Adjunct exists:

You have failed in the last exam,/ and so you have to follow the next exam

. x2

When their father goes off to market, / the older sisters demand fine dresses

(β

Six hundred years had passed / since the Anglo-Saxons had invaded Britain

 α x β

Projection

When someone talks to interlocutor, lots of information can be got and conveyed from the dialogue or conversation. The information obtained not only come from himself/ herself but can also from other people. It means, projection is conveying information obtained from other people, either directly or indirectly.

Projection is defined as "the logical-semantic relationship whereby a clause comes to function not as a direct representation of (nonlinguistic) experience but as a representation of a (linguistic) representation" (Halliday & Matthiessen, 2014: 508). Projection in language has the meaning of reporting (quote – ") or quoting what others have said. The mode of projection sets the interdependency relations between clauses in clause complexes, in terms of parataxis (quotes) and hypotaxis (reports) "representing two degrees of remove from the original source" (Halliday & Matthiessen, 2014: 531) as well as metaphorically in rank-shifted clauses carrying the projected proposition functioning as Qualifier to the projecting head noun.

Projection divided into two types:

1. Locution (")

Locution is a type of projection related to relationship of two clauses in a complex clause where one clause projects the meaning of another clause. In logical function analysis, locution is indicated by the symbol ("). Locution uses a verbal process such as say, tell, ask, answer, reply, insist, complain, cry, shout, and so on. Locution can be found in parataxis or hypotaxis.

Example:

2. Idea (')

Idea is a type of projection related to relationship of two clauses in a complex clause where one clause projects the meaning of another clause. In logical function analysis, ideas are indicated by the symbol ('). The idea of using mental processes like think, imagine, plan, consider, intend, desire, mean, regard, wish, want, and others etc. Ideas can be found in parataxis and hypotaxis.

Example:

"He will raise my salary",/ I imagined. $^{'2} \qquad \qquad 1$
My friend thought/ to commit suicide. $^{\alpha} \qquad \qquad ^{'\beta}$

3. Research Method

Qualitative research is the collection, analysis, and interpretation of comprehensive narrative and visual data in order to gain insights into a particular phenomenon (Gay, Mills & Airasian, 2006). This method is intended to describe everything related to the topic of the research. The descriptive qualitative research as stated by Miles, Huberman & Saldana (2014) is applied in analyzing the data. This research was conducted by applying descriptive qualitative research design. The sources of the data were News and Editorial texts from Jakarta Post.

The data were analyzed by the content analysis technique where the expansion and the projections were identified, analyzed and categorized with reference to SFL theories. The procedures for analyzing the data were as the following.

1) Firstly, News and Editorial texts were taken from Jakarta Post newspaper publications. This step produced 2 texts.

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- 2) Secondly, clause complexes used both Texts were taken as the data. This step yielded 79 clause complexes.
- 3) Thirdly, 50 projections were taken out of 79 clause complexes with parataxis and
- 4) Finally, conclusions were derived from the results of the data analysis.

4. Results and Discussion

4.1 Result

(ii)

=β

To find out the linguistic features and functions, SFL was used as a framework to review the discourse used in news story and editorial including ideational metafunction and interpersonal metafunction. Ideational metafunction and interpersonal metafunction defined in the linguistic functions were found in the clause or the sentence.

The recapitulation of the logical function can be seen in the table 1 below:

Editorial Text				News Story Text		
No	Logical Function	N	%	Logical Function	N	%
1.	1=2	0	0.00	1=2	0	0.00
2.	1 +2	1	4.76	1 +2	2	6.89
3.	1 x2	2	9.52	1 x2	0	0.00
4.	1 "2	0	0.00	1 "2	1	3.44
5.	1 ′2	0	0.00	1 ′2	0	0.00
6.	α =β	6	28.57	α =β	11	37.93
7.	α + β	3	14.28	α + β	0	0.00
8.	α xβ	6	28.57	α xβ	9	31.03
9.	α "β	0	00.00	α "β	4	13.79
10.	α 'β	3	14.28	α 'β	2	6.98
	Total		100.00	100.00	29	100.00

Table 2. The Recapitulation of the Logical Function

In Editorial text, the total of logical function analysis of text was 21 with the highest α x β and α = β were 6 and the proportion was 33.33%. The analysis of the News could be seen below:

Good Job, Jakarta **Editorial Board** The Jakarta Post

Jakarta/Sat, September 1, 2018/09:18 am

- ///The 2018 Asian Games, cohosted this year by Jakarta, 1. (i) α //has eased the city's notorious traffic congestion.///
- 2. (i) ///Learning from Beijing, which successfully reduced traffic jams α
 - (ii) =β //and air pollution during the 2008 Olympics,
 - //Jakarta implemented an odd-even policy (iii) α
 - $=\beta x\beta$ //in which cars were banned on certain days depending on (iv)
 - //whether their license plates ended in odd or even numbers./// (v) α
- 3. The success has prompted the transportation authorities to consider (i) α extending the traffic policy after the Games,
 - (ii) $=\beta$ α which is a good idea despite the many complaints from motorists,
 - (iii) given the positive impacts felt during the event. хβ

- 4. (i) 1 ///However, without sufficient police and transportation officials, drivers, especially those from areas
 - (ii) $x2 \alpha$ //that are not linked to good public transportation,
 - (iii) xβ //are likely to flout the new regulations.///
- 5. (i) $=\beta$ ///Commuters, both in private vehicles and on modes of public transportation,
 - (ii) α //outside the restricted zones still have to endure worsening, even paralyzing congestion.//
- 6. (i) α ///The success of large-scale traffic control
 - (ii) $x\beta \alpha //during$ the Games should be an opportunity
 - (ii) ' β //to further reform traffic and transportation in the capital.///
- 7. (i) 1 ///The routes have to be effective and more efficient
 - (ii) x2 //so that they significantly cut transit times and reach more people.///
- 8. (i) 1 ///Without these efforts, the odd-even rule may soon be ignored
 - (ii) +2 //and just become a good memory from the Games.///
- 9. (i) α ///With the government and auto companies offering incentives to buy cars,
 - (ii) $+\beta$ α //buying a new car with a different plate number may become the solution
 - (iii) 'β //that well-off commuters will choose.///
- 10. (i) α ///Car sales grew 6.35 percent in the first half of the year to 661, 215 vehicles from the corresponding period last year,
 - (ii) = $\beta \alpha$ //which stood at 619,212 vehicles,
 - (iii) $+\beta$ //according to the Association of Indonesian Automotive Manufacturers (Gaikindo).///
- 11. (i) α ///PT Toyota-Astra Motor attributed increasing sales to the traffic restriction
 - (ii) $x\beta \alpha$ //as many high-income customers opted for new cars
 - (iii) $+\beta$ //rather than shifting to public transportation for their daily mobility.///
- 12. (i) $x\beta$ ///If this trend is here to stay,
 - (ii) α //the roads will eventually be clogged again.///
- 13. (i) α ///In Beijing, the short-term success of the traffic rule was reportedly followed by the return of smog from vehicles
 - (ii) 'β //that flooded back into the city.///

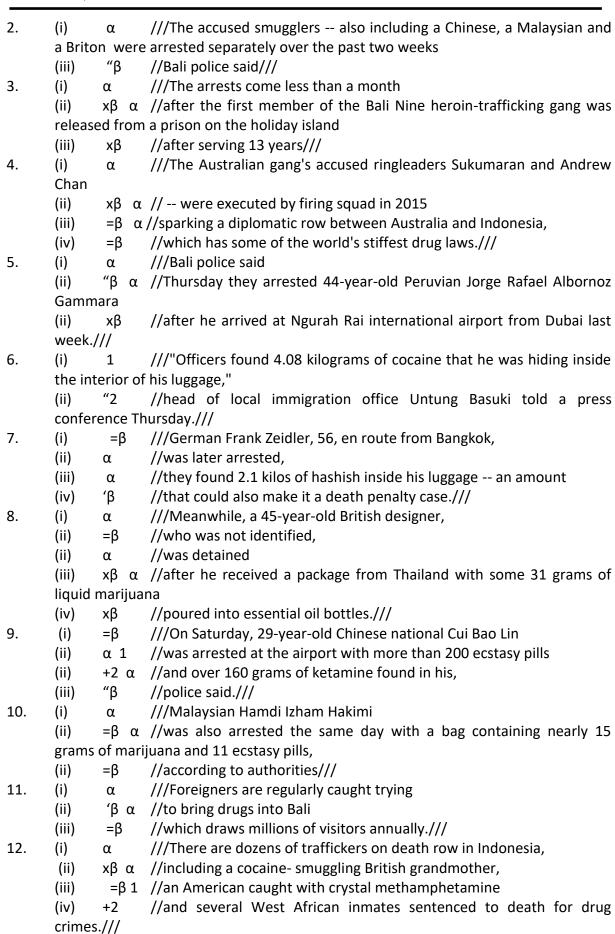
In News Story, the total logical function of text was 29 with the highest α = β was 11 with the proportion was 37.93%. The analysis was:

THE ANALYSIS OF LOGICAL FUNCTIONS IN JAKARTA POST NEWS "FIVE FOREIGNERS ARRESTED IN BALI DRUG SWEEP" THURSDAY, DECEMBER 13, 2018/ 04:19 PM

- 1. (i) α ///Five foreigners have been arrested in Bali
 - (ii) $x\beta \alpha // for drug trafficking authorities said$
 - (iii) "β α // Thursday with a German and Peruvian possibly facing execution
 - (iv) xβ //if convicted under Indonesia's strict drug laws.///

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- 13. (i) α ///High-profile cases like that of Australian Schapelle Corby
 - (ii) $=\beta \alpha$ //who spent more than nine years behind bars for smuggling marijuana into Bali,
 - (iii) $=\beta$ //have stoked concern that Indonesia is becoming a destination for trafficked drugs.///

4.2 Discussion

The results of taxis analysis are tabulated in order to clarify the degree of the difference in the needs of distribution of grammatical elements in each text:

No	Taxis		Editorial	News Story		
	I dXIS	N	Percentage (N)	N	Percentage (N)	
1.	Parataxis	3	14.28	3	10.34	
2.	Hypotaxis	18	85.71	26	89.65	
Total		21	100.00	29	100.00	

Table 3. The Recapitulation of Taxis

It was found that taxis in logical function analysis of News and Editorial Texts applied were two, parataxis and hypotaxis. The proportion of each category was presented in Table 2 in the above. It was found that hypotaxis was dominantly used in both texts with proportion of 85.71% in Editorial texts and 89.65% in News.

5. Conclusion

In Systemic Functional Grammar, the compound is known as a Clause Complex, either an equivalent form or a multilevel form. Complex clause relationships in logical functions include interdependency relations and logico-semantic relations. Logical function is a function that relates to the logical relationship between one clause and other aspects which include two aspects, namely interdependency relations and logico-semantic relations.

In this research, it is found that taxis in logical function analysis of News and Editorial Texts applied two taxis, they are parataxis and hypotaxis. The dominant from News texts α = β was 11 with the proportion of 37.93% and in Editorial texts, α x β and α = β 6 and the proportion was 33.33%. All of the Taxis from the two texts were 85.71% in Editorial texts and 89.65% in News.

This study is limited to texts of two newspaper publications as the data. This potentially leads to limitation of Logical Function in Jakarta Post. If the sources for the data are more than four publications, the findings potentially change. Therefore, it is suggested that other researchers should conduct further studies on logical Function with other sources for the data from different angles.

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