GLOBAL AMBIGUITY RESOLUTION IN SENTENCE PROCESSING OF STATE UNIVERSITY FACULTY IN NORTHERN PHILIPPINES

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Abstract

Generally, this study aimed at determining the syntactic ambiguity resolution of faculty of Cagayan State University-Andrews campus. It profiled the faculty and determined their preferred interpretations of globally ambiguous sentences. The descriptive method, particularly survey and correlation techniques were used in this study. Through a questionnaire and a set of sentences flashed through PowerPoint, data were collected on the profile of faculty and their interpretations of ambiguous sentences. Results revealed that faculty interpreted sentences with coordinated clauses or noun phrases as something that have an ellipsis. Sentences with adverbial phrases or clauses indicate that the respondents prefer to attach the adverbial clause to the lower verb or nearer verb. They prefer to attach the prepositional phrase to the verb in interpreting sentences with prepositional phrases in which the PP is connected to the noun or to the verb. They prefer to attach the non-finite clause because of the structural biases that are already in their minds. They also followed the rule on modifying a noun- that the nearest/nearer noun should be the one being modified. In interpreting negative sentences, they prefer that with fewest syntactic nodes consistent with the rules of the language. The faculty supplied the ellipses in the manner by which few words are provided. In sentences with relative clauses, there are more faculty who preferred to attach the relative clause to the first NP than the closest one. As regards the difference in the interpretations of faculty on sentences under global ambiguity, the data revealed that regardless of sex, age, and years in teaching, the interpretations of faculty of globally ambiguous sentences have no significant difference. However, college affiliation of and discipline taught by the faculty make their interpretation of these sentences different. Based on the findings of the study, it is concluded that CSU faculty evidently explore the meaning of globally ambiguous sentence with frequent reference to semantics in their interpretation of sentences. Because of their failure to provide non-ambiguous interpretations to some sentences, it is deduced that ambiguity is also inherent in Filipino as a language.

Keywords: Global Ambiguity, Sentence Parsing, Structural Ambiguity, Global Ambiguity Resolution \

INTRODUCTION

English language has been widely used by Filipinos – in homes, schools, businesses and almost all undertakings. In other words, English is already a part of the Filipino way of life. However, as mentioned by Florez (2008), in spite of its use for a long period, there are still many instances of misinterpretations due to some factors – message, sender, receiver, channel, context, noise, and all other elements in the transmission of message which are found in the communication process.

These instances of misinterpretations engender cases of structural ambiguity which is very common in language perception and comprehension. Fernandez, et. al. (2011) are of the opinion that many of the sentences people process on a daily basis are either completely (globally) ambiguous or have local ambiguities in multiple places. Besides the elements of transmission of the message, there are more specific causes of these erroneous or dual

interpretations: syntax and morphology, lexicon, prosody and the way the parser operates.

It is inherent for many English sentences to contain multiple meanings because of their structures (which are accepted). Also, Filipinos, who are fond of using English, generally do not use the language in a way native English speakers use it. Hence, there are more possibilities of erroneous message transmission and/or misunderstanding of the meaning intended by the speaker or interlocutor. Sentence parsing involves recovering abstract mental structures based solely on the hearer's knowledge of language, since the signal itself carries no information about syntax. In writing, periods and commas help to indicate when clauses begin and end; in speech, it is also prosody in speech; hence, it sometimes carries information about certain types of syntactic constituents. However, in spoken communication, if a speaker does not use prosody to indicate pauses or beginning of another unit of thought, which also happens, problem on the accuracy of information will surely arise. This is also very true to written communication especially when the writer is not particular with punctuation marks.

With the intent to suggest an explanation to these ambiguities on a psychological perspective, Frazier and Fodor (1978) proposed a processing framework called the Garden Path Model.

The garden path model of sentence processing suggests that, when encountering ambiguous sentences, only one meaning is initially processed. Then, upon reaching the end of, or a key point within, the sentence, if the meaning ascribed does not work the sentence is reparsed until a satisfactory meaning can be ascribed.

It has been found that the longer the ambiguous phrase is, the more difficult processing is. So, if the error signal for a sentence is close to the head of the mis-analysed phrase it is easier to recognize, than if it is several further words distant (Ferreira, Christianson & Hollingworth, 2001). For example, in the sentence "While the man hunted the deer ran into the woods" is easier to reanalyze than "while the man hunted the deer that was brown with speckles ran into the woods" due to the distance between deer and ran in the second example.

Ambiguity resolution involves syntactic and nonsyntactic factors, such as lexical, semantic plausibility and even non-linguistic factors. Lexical semantic and all other factors must be taken into consideration to complete the process of ambiguity resolution.

Needless to mention, faculty interpret sentences based on the very first meaning they establish. Because of the bulk of work and the big number of students enrolled in each class, essays of students are read and scored by teachers based on their initial interpretation. This is true because in English language, syntactically ambiguous sentences are inherent and these are supposed to be difficult. Also, in test questions, structurally ambiguous sentences are unconsciously used. Student interpretation may also transpire in reading the test questions. This can be a source of erroneous answers.

Most of the time teachers who interpret students' essays or sentences stick to their belief and prior knowledge about a subject being talked about. Unfortunately, as expected in any given situation, students do not stay with them in checking their papers to justify or correct any misinterpretation the teachers may give to their work.

STATEMENT OF THE PROBLEM

Generally, this study aimed at determining the syntactic ambiguity resolution in sentence processing of Cagayan State University-Andrews faculty. Specifically, it determined the profile of the teachers in terms of sex, age, discipline/subjects taught, college affiliation, and number of years in teaching. It also investigated the preferred interpretations of the faculty members on sentences under Global ambiguity along: Sentences with coordinated clauses or noun phrases, Sentences with adverbial phrases or clauses, Sentences with prepositional phrases in which the PP could be connected to the noun or the verb, Sentences with non-finite clause in which the subject of the non-finite clause is not clear, Negative sentences, Sentences with relative clauses, Sentences with ellipsis in the second clause. Further, it tested if there a significant difference in the interpretations of the faculty on sentences under global ambiguity when grouped according to their profile variables.

METHODOLOGY

This study used the descriptive-survey design and the descriptive-comparative design. The descriptive survey was used in eliciting the information of the respondents particularly their profile such as sex, age, number of years in teaching, college affiliation, and discipline/subjects taught. Survey was also used in determining the interpretations of the faculty in all the sentences given them, specifically their preferred interpretations of the sentences under global ambiguity, the interpretations they derived from the sentences under local ambiguity, the frequency of use of the late closure strategy and minimal attachment strategy.

Descriptive-comparative was used to determine if there is a significant difference in the interpretations of the faculty members on sentences under global ambiguity when grouped according to their profile variables; if there is a significant difference in the interpretations of the faculty members on sentences under local ambiguity when grouped according to profile variables; and if there is a significant difference in the frequency of use of the late closure strategy and minimal attachment strategy when they are grouped according to profile variables.

The respondents of the study were the faculty members of Cagayan State University-Andrews campus, both tenured and part time who have at least 15 units of teaching workload in the second semester, school year 2016-2017. These are teachers across disciplines including as well the Filipino teachers.

Based on the total number of faculty per college, Slovin's formula at 5% margin of error was used to determine the sample size. Hence, the sample size is 113: College of Hospitality Industry Management, 31; College of Business Entrepreneurship and Accountancy, 32; College of Allied Health Sciences, 19; and College of Teacher Education, 31. The tool was adopted from the study of Mohammad I. Khawalda & Emad M. Al-Saidat (2012). When permission was granted by authorities, the researcher coordinated with the deans for the schedule of meeting faculty members for this purpose.

During the conduct of the study, the researcher first surveyed the profile of the respondents in terms of sex, age, number of years in teaching, college affiliation and discipline/ subjects

taught. Also, he identified their syntactic ambiguity resolution or interpretation of sentences under global ambiguity. The data were gathered by letting the respondents translate the sentences under global ambiguity in Filipino language. These sentences were flashed through PowerPoint, showing them one sentence at a time. Each sentence was flashed for 15 -30 seconds. This included their translation. Time limit was used to avoid participants' tendency to copy answers from their seatmates and/or take too long in building their interpretation. This is based on the reality that sentence parsing is not done at a long period i.e. ordinary conversation, reading. Three inter-coders were involved to validate the interpretations of the researcher.

RESULTS AND DISCUSSION

Table 1: Profile of teachers

Category	Frequency (n = 113)	Percent
Sex		
Male	42	37.2
Female	71	62.8
Age		
21 – 25	24	21.2
26 -30	16	14.2
31 – 35	23	20.4
36 – 40	15	13.3
41 – 45	9	8.0
46 – 50	9	8.0
51 – 61	17	15.0
Mean = 36.58 SD = 10.89		
Discipline/Subjects Taught		
CHIM Professional/Major Subjects	25	22.1
CBEA Professional/Major Subjects	18	15.9
CTED Professional/Major Subjects	11	9.7
CAHS Professional/Major Subjects	12	10.6
English	11	9.7
Mathematics	8	7.1
Social Sciences	9	8.0
Psychology	1	0.9
Natural Sciences	13	11.5
Filipino	2	1.8
Computer	3	2.7
College Affiliation		
College of Hospitality Industry Management	31	27.4
College of Allied Health Sciences	19	16.8
College of Teacher Education	31	27.4
College of Business Entrepreneurship and Accountancy	32	28.3

Number of Years in Teaching		
1 – 5	41	36.3
6 – 10	27	23.9
11 – 15	10	8.8
16 – 20	9	8.0
21 – 25	14	12.4
26 – 40	12	10.6
Mean = 11.98 SD = 10.28		

Table 1 presents the profile of the teachers. Considering sex as the variable, of the 113 faculty-respondents, there are 71 or 62.8 percent female teachers and 42 or 37 percent male teachers teaching in the four colleges of Cagayan State University-Andrews Campus.

According to age, twenty-four or 21.2 percent belong to the age bracket of 21-25; 23 or 20.4 percent belong to the age bracket of 31-35; 17 or 15 percent belong to the age bracket of 51 and above; 16 or 14.2 percent belong to the age bracket of 26-30; 15 or 13.3 percent belong to the age bracket of 36-40; 9 or 8.0 percent belong to the age bracket of 41-45; and 9 or 8.0 percent belong to the age bracket of 46-50. This shows that faculty of the Cagayan State University-Andrews campus are relatively young since most of the respondents are distributed in the age bracket of 21-35.

In terms of the discipline/subjects taught by the faculty, twenty five or 22.1 percent of the faculty handle professional and/or major subjects of the College of Hospitality Industry Management; 18 or 15.9 percent teach professional and/or major subjects in the College of Business Entrepreneurship and Accountancy; 13 or 11.5 percent teach Natural Sciences; 12 or 10.6 percent teach professional and/or major subjects in the College of Allied Health Sciences; 11 or 9.7 percent teach the professional and/or major subjects in the College of Teacher Education; also, 11 or 9.7 percent of them handle English subjects; 9 or 8.0 percent teach Social Sciences; 8 or 7.1 percent teach Mathematics; 3 or 2.7 percent handle Computer subjects;2 or 1.8 percent handle Filipino subjects; and 1 or 0.9 percent handle Psychology subjects. From the 113 sample size of the faculty-respondents, most of them (66 or 58.4%) handle Professional and/or Major Subjects in the four colleges.

As regards their college affiliation, 32 or 28.3 percent are from the College of Business Entrepreneurship and Accountancy; 31 or 27.4 percent are from the College of Hospitality Industry Management; 31 or 27.4 percent belong to the College of Teacher Education; and 19 or 16.8 percent are affiliated with the College of Allied Health Sciences.

Relative to the number of years in teaching, there are 41 or 36.3 percent of the faculty who have been teaching for 1-5 years; 27 or 23.9 percent of them have been teaching for 6-10 years; 14 or 12.4 percent of them have been teaching for 21-25 years; 12 or 10.6 percent of them have been teaching for 26 years or longer; 10 or 8.8 percent of them have been teaching for 11-15 years; and 9 or 8.0 percent of them have been teaching for 16-20 years. Hence, most of the teachers in Andrews's campus are relatively young in terms of the number of years in teaching as revealed by the mean age of 36.58.

Preferred Interpretations of Teachers on Sentences under Global Ambiguity

Table 2: Preferred interpretations of the faculty of globally ambiguous sentences with coordinated clauses or noun phrases

Sentences with coordinated clauses or noun phrases	Interpretation A		Interpretation B	
	Frequency	Percent	Frequency	Percent
Sentence 1. He said lies and hurt his friends.	50	44.2	52	46.0
Sentence 2. Bill and Mary got married.	-	-	-	-
Sentence 3. Don't eat fish and meat.	-	-	-	-

Table 2 shows the preferred interpretation of the faculty of sentences containing global ambiguity particularly those sentences with coordinated clauses or noun phrases. As seen on the table, the three sentences have two possible correct interpretations marked as Interpretation A and Interpretation B.

The interpretation A of sentence 1 which is "He said lies and hurt his friends" is translated in Filipino as "Nagsinungaling (siya) at sinaktan (nasaktan) niya ang kanyang mga kaibigan." This translation manifests no ellipsis in the interpretation of 50 faculty or 44.2 percent from a total 113 respondents. They interpreted the sentence such that there is only a compound verb which is "lies and hurt" in one independent clause, ignoring the presence of ellipsis. These faculty members manifest structural bias during parsing and interpretation of the sentence.

On the other hand, there are 52 faculty or 46.0 percent respondents from a total of 113 samples who interpreted the same sentence as something that has an ellipsis; hence, their translation is "Nagsinungaling siya sa (kanyang) mga kaibigan kaya (at dahil dito) ay nasaktan sila." Their preferred translation or interpretation suggests that they understood the sentence as something to be a compound sentence since they added the elliptical clause "because of this, he…" in the sentence, making it like this: "He said lies and because of this, he hurt his friends". These faculty indeed explored the meaning of the globally ambiguous sentence. Hence, semantics was explored too.

There was an attempt of the faculty to translate sentence 2 "Bill and Mary got married" and sentence 3 "Don't eat fish and meat." However, their Filipino interpretations of these sentences are also ambiguous. This is why, there are no figures indicated on the table.

In sentence 2, their translation goes like these: "Nagpakasal sina Bill at Mary", "Ikinasal sina Bill at Mary", or "Sina Bill at Mary ay nagpakasal", to name a few. These Filipino translations are also ambiguous since they all mean two possible interpretations which are "Bill and Mary married each other" and "Bill married another girl and Mary married someone else." For these teachers to have proven that they want their interpretation to be clear containing only one interpretation, they should have given translations such as these: "Nagpakasal si Bill sa ibang babae at nagpakasal din si Mary sa ibang lalaki" if they mean "Bill married another girl and Mary married someone else" or "Ikinasal ni Bill si Mary" if they mean "Bill and Mary married each other."

Same instance is true to sentence 3 "Don't eat fish and meat." The source of ambiguity in this sentence is similar to sentence 1 and sentence 2. The sentence means either "not to eat fish and meat at the same time" or "eating meat is forbidden, moreover, eating fish is also forbidden". None of the faculty has a definite interpretation of this sentence based on their Filipino translation.

Therefore, this is an evidence that ambiguity is also inherent in Filipino as a language.

Table 3: Preferred interpretation of the faculty of the globally ambiguous sentences with adverbial phrases or clauses

Sentences with adverbial phrases or clauses	Interpretation A		Interpretation B	
	Frequency	**Percent**	**Frequency**	**Percent**
Sentence 4. I told him to run again.	1	0.9	109	96.5
Sentence 5. He said I met her last week.	-	-	109	96.5
Sentence 6. He said he saw her when she left.	-	-	102	90.3

Table 3 reveals the preferred interpretations of the faculty of the sentences with adverbial phrases or clauses with Global Ambiguity. The source of ambiguity in this group of three sentences is the use of adverb which could be attached to the main verb or the embedded verb.

For instance, the first sentence of this group "I told him to run again" could mean "I told him again" or "to run again". Only 1 faculty or 0.9 percent interprets it as "I told him again…" or "Again, I told him…" taking interpretation A. This means that the adverb "again" modifies the main verb of the sentence which is "told". On the other hand, there are 109 or 96.5 percent faculty-respondents who chose interpretation B which is "to run again". They attach the adverb "again" to the verb of the infinitive "to run".

The source of ambiguity of sentence 5 "He said I met her last week" is the adverb "last week" which could be attached and could modify the main verb "said" or it can be attached to and modify the verb of the subordinate clause "met". There are 109 or 96.5 percent of the faculty who prefer interpretation B which attaches the adverb to the verb of the subordinate clause. None of the faculty prefers interpretation A which assigns the adverb to modify the main verb of the sentence. Hence, 109 of the faculty interpreted "last week" as the "time of meeting" and none interpreted it as the "time of saying".

In sentence 6 "He said he saw her when she left," the source of ambiguity is the adverb clause "when she left" which could be attached to the main verb "said" or to the verb of the subordinate clause "saw". 102 or 90.3 percent of the faculty understood sentence 6 as "when she left, he saw her". This means that the 102 faculty interpreted "when she left" as the time of seeing. None of the faculty-respondents understood the adverb clause "when she left" as the time of saying; hence, none of them attached the same adverb to the main verb of the sentence "said".

The interpretation of the faculty of these three sentences goes with the results of some previous studies (Kimball, 1973 and Altmann, et. al., 1998) which indicate that the respondents prefer

to attach the adverbial clause to the lower verb or nearer verb. In its Psycholinguistic sense, these faculty have structural biases since they opt to use low attachment in interpreting this group of sentences. They are strict in following the "rule of thumb" in modifying the verbs: the nearest verb to the adverb is the one being modified.

Table 4: Preferred interpretations of the faculty of the globally ambiguous sentences with prepositional phrases in which the PP is connected to the noun or to the verb

Sentences with prepositional phrases in which the PP is connected to the noun or to the verb	Interpretation A		Interpretation B	
	Frequency	Percent	Frequency	Percent
Sentence 7. He saw the man with the binoculars.	11	9.7	98	86.7
Sentence 8. The girl hit the boy with the book.	110	97.3	-	-
Sentence 9. I want the music book on the table.	48	42.5	62	54.9

Table 4 demonstrates the preferred interpretations of the faculty of the globally ambiguous sentences with prepositional phrases in which the PP is connected to the noun or to the verb. The source of ambiguity of these sentences is the presence of the prepositional phrase in the final position.

In sentence 7 "He saw the man with the binoculars," the prepositional phrase "with the binoculars" is located in the final position of the sentence. Hence, it could be attached to the object of the main verb which is "man" or it can be attached to the main verb of the sentence "saw". In this sentence, 98 or 86.7 percent of the faculty-respondents attached the "with binoculars" to the NP "man" interpreting the sentence such that "the man has binoculars". Only 11 or 9.7 percent of the faculty attached the PP to the main verb having an interpretation such that "the binoculars serve as aid in seeing the man". Most of the faculty preferred to attach the PP to the nearer or lower word.

One hundred ten or 97.3 percent of the faculty interpreted Sentence 8 "The girl hit the boy with the book" such that the PP "with the book" is attached to the verb "hit", making the book as an instrument in hitting the boy. None of the faculty chose interpretation B which attaches the PP to the more recent noun "boy". This contradicts the preference of subjects (faculty) to low attachment in the three sentences in table 2.2 as stipulated by Kimball, 1973 and Altmann, et. al., 1998.

Rayner, et al. (1983) examined sentences such as sentence 8 and found that there is initial preference for the verb phrase attachment. That is, the subjects (respondents) attach the prepositional phrase with the verb rather than the NP ('the boy').

A number of studies have pointed out that the interpretation of sentences which include PP can be modified by some factors such as the type of verb involved (Konieczny, Hemforth, Scheepers, & Strube, 1997; Spivey-Knowlton & Sedivy, 1995) and the argument status of the prepositional phrase (Schuetze & Gibson, 1999) or the choice of preposition (Katsika, 2009).

Referential context has been manifested by the faculty because, upon reaching the verb "hit", they immediately thought of an instrument in hitting. That is why, when they encountered the PP, they thought of its object as the instrument, attaching it to the verb.

The ambiguity in sentence 9 "I want the music book on the table" is still on the PP attachment, whether "on the table" is attached to the "music book" or to the verb "want". There are 48 or 42.5 percent faculty who preferred to attach the PP "on the table" to the verb "want", while there are 62 or 54.9 percent faculty who preferred to attach the PP to the noun "music book". Unlike in the case of globally ambiguous sentences with adverbial phrases and clauses, the faculty are distributed between Interpretation A and Interpretation B (sentence 9).

The result of these three sentences match the result of previous studies (Pan and Felser, 2011) in which it is preferable to attach the prepositional phrase to the verb. Other factors which could affect the attachment of PP like the type of the verb and those that are mentioned by Konieczny, Hemforth, Scheepers, & Strube, 1997; Spivey-Knowlton & Sedivy, 1995, Schuetze & Gibson, 1999, and Katsika, 2009 are not included in this study.

Table 5: Preferred interpretations of the faculty of the globally ambiguous sentences with non-finite clause in which the subject of the non-finite clause is not clear

Sentences with non-finite clause in which the subject of the non-finite clause is not clear	Interpretation A		Interpretation B	
	Frequency	Percent	Frequency	Percent
Sentence 10. He killed the cat crossing the street.	108	95.6	1	0.9
Sentence 11. The horse is ready to ride.	84	74.3	24	21.2

Table 5 displays the preferred interpretations of faculty on sentences with non-finite clauses without a subject which is the source of the occurrence of global ambiguity. The non-finite clause in sentence 10 "He killed the cat crossing the street" is the "crossing the street". There are 108 faculty or 95.6 percent preferred to attach the non-finite clause to the more recent noun "cat" making the it the subject of the "crossing the street"; hence, their interpretation goes like this: "… while the cat was crossing the street" or "… the cat which was crossing the street." Only 1 or 0.9 percent of the faculty preferred to attach the non-finite clause to the main subject "he", which has the following reading: "He killed the cat while he was crossing the street."

The next sentence "The horse is ready to ride" contains the non-finite clause "to-infinitive". The subject of this clause could be the "horse" or "someone". There are 84 or 74.3 percent respondents who chose "someone" to be the subject of the non-finite clause. Accordingly, the reading of the sentence is "The horse is ready for someone to ride." There are 24 or 21.2 percent faculty who preferred "horse" as the subject of the non-finite clause. Hence, the interpretation is that the horse is the one that is going to ride on something.

In the first sentence, the faculty prefer to attach the non-finite clause because of the structural biases that are already in their minds. Like the interpretations of the faculty in some of the previous sentences, the faculty also followed the rule on modifying a noun- that the

nearest/nearer noun should be the one being modified. In the second sentence, most of the faculty interpreted it having in mind both the referential context and structural biases. However, referential context still prevailed in their interpretation of sentences.

Table 6: Preferred interpretations of the faculty of the globally ambiguous negative sentences

Negative sentences	Interpretation A		Interpretation B	
	Frequency	Percent	Frequency	Percent
Sentence 12. All of you won't pass.	16	14.2	96	85.0
Sentence 13. I didn't close the door because he left.	2	1.8	108	95.6

Table 6 exhibits the preferred interpretation of the faculty of the Globally Ambiguous Negative Sentences. In these sentences, negation is the source of ambiguity. That is, what is being negated in the sentence?

For instance, in sentence 12 "All of you won't pass", the one being negated could be "pass". In other words, "no one will pass". There are 96 or 85.0 percent of the faculty who preferred interpretation B, that is, to attach the negation to the word "pass". On the other hand, interpretation A was preferred by only 16 faculty or 14.2 percent. That means they attach the negation to the word "all". They understood the sentence as "Not all of you will pass (some or most of you)". In sentence 13 "I didn't close the door because he left", still the cause of ambiguity is the scope of negation. The negative particle in this sentence could be interpreted to negate the verb "close" or to negate the reason of the speaker/writer "because he left". There are 108 faculty or 95.6 percent who preferred to attach the negation to the verb close. The faculty translated this as "Hindi ko sinara 'yung pinto dahil (kasi) umalis siya." On the other hand, there are only 2 faculty or 1.8 percent who preferred to negate the clause "because he left". The reading of this sentence becomes "My reason for not closing the door is not because he left but because…" In Filipino, "Ang dahilan ng hindi ko pagsara ng pinto ay hindi dahil umalis siya kundi dahil…" The faculty interpreted the sentence 12 using their structural bias which immediately comes as an aid for them to resolve immediately their parsing. They immediately think that "not" is attached to "pass", the word nearest it. In the second sentence, the readers resolved their interpretation using the fewest syntactic nodes consistent with the rules of the language (Frazier, 1987; Frazier and Fodor, 1978).

Table 7: Preferred interpretation of the faculty of the globally ambiguous sentences with ellipsis in the second clause

Sentences with ellipsis in the second clause	Interpretation A		Interpretation B	
	Frequency	Percent	Frequency	Percent
Sentence 14. She loves her dog more than her husband.	107	94.7	2	1.8
Sentence 15. I know a richer man than John.	110	97.3	1	.9

Table 7 reflects the globally ambiguous sentences with ellipsis in the second clause. The group of sentences contains ellipsis in the second clause which results in leaving an NP that could be interpreted as either subject or object. For example, in sentence 14 "She loves her dog more than her husband," a part of the elliptical clause which is "her husband" can be the subject of the whole elliptical clause which reads this way: "She loves her dog more than her husband loves her dog." Out of 113 faculty, only 2 or 1.8 percent preferred this interpretation.

On the other hand, 107 out of 113 faculty preferred to interpret "her husband" as the object of the whole elliptical clause; hence, the sentence goes this way: "She loves her dog more than she loves her husband."

Sentence 15 "I know a richer man than John" has been interpreted by 110 out of 113 faculty as "I know a man who is richer than John." In this case, most of the faculty understood "John" as the object of the elliptical clause which was translated as "May kilala akong lalaki na mas mayaman kaysa kay John." Also, there is another 1 faculty who understood the sentence as "John" being the subject of the elliptical clause which reads this way: "I know a richer man than any man John knows".

In both sentences, the faculty supplied the ellipses in the manner by which fewer words are provided. They still resorted to using the fewest syntactic nodes in interpreting the ambiguous sentences.

Table 8: Preferred interpretation of the faculty of the globally ambiguous sentences with relative clauses

Sentences with relative clauses	Interpretation A		Interpretation B	
	Frequency	Percent	Frequency	Percent
Sentence 16. The driver of my sister who lived there died.	29	25.7	79	69.9
Sentence 17. The mother of my friend who bought the house left.	35	31.0	77	68.1
Sentence 18. The box of toys which I bought is expensive.	24	21.2	89	78.8

Table 8 presents the preferred interpretation of the faculty of the globally ambiguous sentences with relative clauses. These sentences contain ambiguity because the relative clause could be attached to one of the NPs. In sentence 16 "The driver of my sister who lived there died", the relative clause "who lived there" can be attached to the subject "driver" or to the object of the preposition "sister". There are 29 out of 113 faculty who preferred to attach the relative clause to "sister", the more recent NP. There are also 79 of them who preferred to attach the NP "driver" to the relative clause.

Sentence 17 "The mother of my friend who bought the house left" also manifests global ambiguity due to the relative clause "who bought the house" could also be attached to the two NPs, "friend" and "mother". Out of 113 faculty, only 35 preferred to attached the relative clause to "friend" while 77 attached it to "mother".

This is also true to sentence 18 "The box of toys which I bought is expensive". The reltive clause "which I bought" can also be attached to two NPs in the sentence, "toys" and "box". There are only 24 faculty who preferred to attach the relative clause to the NP "toys" while there are 89 of them who preferred to attach the relative pronoun to "box".

To summarize, there are more faculty who preferred to attach the relative clause to the first NP than the closest one. This contradicts the statement of some scholars (Cuetos and Mitchell, 1988) who claim that their subjects (respondents) prefer to attach the relative clause to lower NP; whereas, the result of this study shows that the faculty prefers to attach the relative clause to the higher NP (the first NP) in the sentence. In addition, they believe that the NP in the "of phrase" is not the NP being talked about by the predicate of the sentence, but the first NP. This is another structural bias being used by the faculty in resolving ambiguity in interpreting this kind of sentences. To illustrate, sentence 16 has been modified. They would prefer this sentence "The driver of my sisters who lived there is gone" than "The driver of my sisters who lived there are gone". In the S-V agreement, they would say that the verb of the main clause should be singular "is gone", not plural "are gone". Being their orientation in terms of sentence structure, NPs of main clauses are the ones they attach to relative clause and not the NPs of the PPs.

Table 9: Summary on the preferred interpretations of faculty on sentences under global ambiguity

Category of Sentences with Global Ambiguity	Average Percentage of Faculty Indicating Preference (n = 113)	
	Interpretation A	Interpretation B
Sentences with coordinated clauses or noun phrases	44	46
Sentences with adverbial phrases or clauses	0.9	95
Sentences with prepositional phrases in which the PP is connected to the noun or to the verb	56	71
Sentences with non-finite clause in which the subject of the non-finite clause is not clear	85	11
Negative sentences	8	90
Sentences with ellipsis in the second clause	96	1
Sentences with relative clauses	26	79

Table 9 shows the summary of faculty preferences in interpreting a sentence with global ambiguity.

The first category contains sentences with coordinated clauses or noun phrases. Out of 113 faculty, there are 44 percent of them who preferred the interpretations under column A and 46 percent under column B. Please note that the only sentence considered in the derivation of this value is the first sentence since sentence 2 and sentence 3 have ambiguous interpretations/translations. It is in here where ellipsis can be a factor in interpreting the sentence/s. It is found out that there are more faculty who preferred interpreting the sentences

as having ellipsis.

The second category contains sentences with adverbial phrases or clauses. In here, adverbs can either be attached to the main verb or to the more recent verb; hence, the ambiguity. This part shows that the faculty prefer to attach the adverbial phrases and clauses to the more recent verb; hence, there is low attachment. This is illustrated by the percentage of faculty indicating preference in interpretations in the second column, which is 95 percent.

The third category contains sentences with prepositional phrases in which the PP is connected to the noun or to the verb. The PP attachment causes the sentences to be globally ambiguous. In here, most of the faculty preferred the interpretations in column B where it supports the claim of Kimball (1973) and Altmann, et. al. (1998) regarding the preference of subjects/respondents to low attachment. However, it is also in here that factors affecting the PP attachment should also be considered.

The fourth category contains sentences with non-finite clause in which the subject of the non-finite clause is not clear. The cause of ambiguity is the ellipsis making it possible for the non-finite clause to be the attached to most recent noun or to the subject of the sentence. Eighty-five percent of the faculty preferred the interpretations in the first column.

The fifth category contains negative sentences where the attachment of negations can be more than one; hence, the ambiguity. In these sentences, the negation can cover either the subject or the verb. Ninety percent of the faculty preferred the interpretations in the second column, the negation covers the verb.

The sixth category contains sentences with ellipsis in the second clause where the NP can be either the subject or object of the second clause. Most of the faculty (96 percent) preferred the interpretations in column A, making the NP as the object of the second clause.

The seventh category contains sentences with relative clauses. The ambiguity in this category is caused by the attachment of the relative clause which can be either the former NP or latter NP. In this study, most of the faculty (79%) preferred the interpretations in column B where the relative clause is attached to the former NP. Hence, in this case of global ambiguity, there is a higher preference of attaching relative clause to the higher NP than the lower NP.

Preferred Interpretations of Sentences under Global Ambiguity by Profile Variables

Table 10: Comparison on the global ambiguity interpretations of teachers when grouped by profile variables

Variables	Statistical Tool	Mean	df	Computed Statistics	Prob.	Statistical Inference
Sex						
Male		5.64				
Female	t	5.77	111	0.571	0.503	Not significant
Age						
Young (21 - 35)		5.87				
Old (36 -61)	t	5.54	111	1.689	0.094	Not significant
Number of Years in Teaching						
Relatively Recent (1 - 12 years)		5.87				
Relatively Long (13 - 41 years)	t	5.49	111	1.901	0.060	Not significant
College Affiliation						
CHIM		6.55				
CBEA		5.62				
CAHS		5.32				
CTED	F	5.26	3/109	11.689	0.000	Significant at 0.05
Discipline/Subjects Taught						
CHIM		6.76				
Psych, Filipino, Computer		5.83				
CBEA		5.67				
English		5.64				
Social Science		5.56				
CAHS		5.50				
Mathematics		5.25				
Natural Sciences		5.08				
CTED	F	5.00	8/104	6.072	0.000	Significant at 0.05

Table 10. Presents the comparison of the interpretations of sentences under global ambiguity when faculty are grouped according to profile variables. When faculty are grouped considering sex as the profile variable, the study found out that there exists no significant difference in the interpretations of the faculty of globally ambiguous sentences. This finding is based on the t-values having probability values of 0.503 which is greater than 0.05. Hence, the null hypothesis is accepted.

As regards grouping the faculty by age, two groups which are young and old do not show any significant difference in their interpretations of globally ambiguous sentences. Its probability value which is 0.094 is greater than 0.05; hence, the null hypothesis is accepted.

In the light of their number of years in teaching which is grouped into two: relatively young

and relatively old, it has been found out that there is no significant difference in the interpretation of the faculty as shown further by the probability value of 0.060 which means that the null hypothesis is accepted.

Summarily, these three foregoing profile variables (sex, age, and number of years in teaching) do not influence the interpretation of the faculty on globally ambiguous sentences.

On the other hand, when faculty are grouped as to college affiliation, the computed probability value is 0.000 which is lower than 0.05 level of significance shows a significant difference in their interpretations of the globally ambiguous sentences.

As presented in the table, the College of Hospitality Industry Management (CHIM) has the highest mean which is 6.55. It indicates that they differ in the interpretations of sentences under the subcategories of sentences under global ambiguity. The second highest mean is the College of Business Entrepreneurship and Accountancy (CBEA) with a mean value of 5.62. Third is the College of Allied Health Sciences (CAHS) with a mean of 5.32, and the fourth is the College of Teacher Education (CTED) with a mean of 5.62.

When compared, the mean difference of the CHIM and CBEA is 0.92 (Appendix Table 1). CHIM and CAHS have a mean difference of 1.23. CHIM and CTED have a mean difference of 1.29. Hence, the other three colleges (CBEA, CAHS, and CTED) do not show significant difference in their interpretations of globally ambiguous sentences when compared to one another.

This difference in their interpretations of the sentences under global ambiguity means that most faculty of CHIM preferred the first interpretations (Interpretations A) over Interpretations B. Noting that there is no wrong interpretation between the two, the study claims that the resolution of CHIM faculty in interpreting globally ambiguous sentences is different from the other three colleges. It means that there are ambiguous sentences in the sub-categories which, when interpreted by the other three colleges using interpretation B, the faculty of CHIM opted to use interpretation A.

When grouped by discipline, the faculty still manifest significant difference in their interpretations of globally ambiguous sentences as reflected in the probability value of 0.000 which is lower than 0.05 level of significance; hence, the null hypothesis is rejected. The first in the list is the faculty teaching major/professional courses in CHIM. This finding is consistent with the data presented when they were grouped by college affiliation, making them first in the list.

CONCLUSION

Based on the findings of the study, it is concluded that CSU faculty evidently explore the meaning of globally ambiguous sentence with reference to semantics in their interpretation of sentences. Because of their failure to provide non-ambiguous interpretations to some sentences, it is deduced that ambiguity is also inherent in Filipino as a language. Notably, these faculty have structural biases as exhibited in parsing a sentence where they are affected by their prior

knowledge on sentence structures, making them become strict in following the "rule of thumb" in modifying the verbs which states that the nearest verb to the adverb is the one being modified. Likewise, they followed the rule on modifying a noun considering the nearest/nearer noun should be the one being modified.

RECOMMENDATIONS

In the light of the findings and conclusions drawn from the study, the following recommendations are hereby offered:

1. Cagayan State University administration, through the Office of the Vice President for Academic Affairs, should design a program or project for the faculty to become more critical in their construction of test questions because these may contain ambiguities which can result to erroneous interpretation of students, making them give erroneous answers. More so, students' answers on essay type of tests should be dealt with more critically by faculty; hence, another intervention for this purpose may be undergone.
2. Trainings purported to develop accurate interpretation of globally ambiguous sentences vis-a-vis student outputs should be designed and implemented to avoid faculty erroneous interpretation and/or misinterpretation in sentence resolution.
3. Further studies to explore other factors affecting prepositional phrase attachments may be studied.
4. L2 researchers should dwell on global ambiguities in the Philippine setting.
5. Filipino faculty-researchers should also focus on studying ambiguities in Filipino language.

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