A Minimalist Account of Null Arguments in Maybrat

by

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A Dissertation Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

Approved March 2022 by the
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ARIZONA STATE UNIVERSITY

May 2022

ABSTRACT

This dissertation presents a minimalist account of null arguments in Maybrat. Different generative theories have been put forward for conditions that trigger the appearance of null subjects in a number of languages. There have been two general lines of position since Perlmutter's initial identification of null subjects in some European languages. The first posits that null subjects (pro) appear in languages with a rich agreement paradigm, known as the rich agreement hypothesis. The second argues that rich agreement is not attested in other languages. It suggests that discourse context triggers the appearance of null pronouns. This study was based on the descriptive analysis of 18 stories gathered from the fieldwork and corpus of Maybrat spoken texts. It claims that the two approaches may not fully explain the appearance of null arguments in Maybrat for three respects. First, the null subjects appear in the clauses that both have agreement and no agreement. Second, not all verbs with agreement markers are fully specified in person, number, or gender features (ϕ-features). Third, objects are also dropped freely in many contexts despite the lack of agreement. Building on the minimalist framework of Agree, the dissertation proposes the derivation of pro in two ways. First, the Tense (T) head is strong in ϕ-features and pro is a Determiner Phrase (DP). They participate in a local Agree relation. Second, pro is weak in definite feature (D-feature) and the functional head T is deficient for lacking ϕ-features. The Agree relation can operate if T inherits the features from the Complementizer (C) head. Thus, a long-distance Agree between C and pro is assumed. This dissertation concludes that the appearance of null arguments in Maybrat is licensed either by the agreement head, the discourse context, or a combination of the two conditions. However, among the three

conditions, discourse context plays a significant role in promoting the null arguments since pro appears regardless of the verbal agreement inflections. For this reason, this dissertation also proposes that Maybrat may be classified as a radical pro-drop language.

I dedicated this dissertation to my beloved wife Helena Leba

and children: Patrick ‘Remo’, Gabriella ‘Faya’, and Willy ‘Hesa’.

ACKNOWLEDGMENTS

I acknowledge that this dissertation would not have been completed without support, guidance, and motivation from many people, especially during my research work and the completion of this project.

First and foremost, I would like to express my gratitude to my academic and thesis advisor Dr. Elly van Gelderen who had guided me unceasingly throughout the bad and good days of my study. Elly showed her constant support and encouragement, especially in giving insightful comments and critiques that had motivated me to escape from my comfort zone.

I am also grateful to have Dr. Kathryn Pruitt and Dr. Tyler Peterson as my committee members. Kathryn helped me to think critically from the first day of my encounter with her. I am thankful for her continuous support and encouragement for conducting this research, especially the fieldwork. Tyler inspired me for my interest in language documentation through the works that he shared. I am grateful that this all has encouraged me to set my future career and research goals.

I am indebted to my language consultants in West Papua, Indonesia for their great support throughout the entire data collection process, especially during the 5-month fieldwork. I would like to thank Mama Rita Turot, Bapa Lukas Turot, and Mama Magdalena Wafom for their willingness and patience to participate in the interviews. I also would like to thank Ade Emiel Turot, Om Martinus Turot, Ade Filomena Turot, Om Petrus Yumte, Bapa Yunus Wafom, Ade Susana Air, Tanta Afra Fatie, Pater Yan Pieter Fatem, OSA, Frater Kristian Sasior, OSA, Frater Marten Pasi Turot, OSA, Ade Marten

Daniel Turot, and Ade Paskalis (Pakot) Kocu who had constantly been available any time I had problems with the data collection and description.

I would like to express my deepest gratitude to my beloved wife, Helena Leba and my children Patrick, Gabriela, and Willy as well as Andy for their constant loving support through persistent prayers and long-distance calls that have kept me strong. I am also grateful to have my brother Engelberth Kocu who has been my hero for his incessant support and prayers for me and my family from the start of my study in the US. I could not be more thankful for his wife Mien Kocu who had shared the same support. May you and your son Deo rest in peace! Finally, I thank Paskalina Kocu, my sister, who has always been around and supported me when things are beyond my reach.

Last but not least, I am thankful for the great opportunity the Fulbright Exchange Program shared that has helped widening my horizon of a different world around me. Specifically, my four-year study in the US would not have been accomplished without the generous funding and support from American Indonesian Exchange Foundation (AMINEF) and the Directorate General of Higher Education (DIKTI), Ministry of Education, Culture, Research and Technology of Indonesia.

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LIST OF ABBREVIATIONS

ADV	adverbial
DIST	distance
ECT	elicitation
EMPH	emphatic
ENUM	enumerator
EXP	Expression
EXC	Exclusive
GEN	general
INC	Inclusive
INT	interrogative
k.o.	kind of
LOC	locative
M	masculine
N	nominal
Neg	negator
NOM	nominalizer
NRT	narrative
OS	opposite sex
P	plural
PART	particle
POSS	possessive
PRESTT	presentative
REDUP	reduplicated morpheme
REL	relativizer
S	singular
SP	species
SPEC	specific
SS	same sex
TRANS	transitivizer
U	underspecified

CHAPTER 1

INTRODUCTION

1.1. Background

It has widely been known that some languages regularly drop the subject or object of a finite clause. Italian and Spanish are two languages that typically drop the subjects. Chinese and Japanese are also of this category, but they massively drop the subjects and objects. English and French are excluded since they require the argument to be pronounced.

(1)	*parl-o Italiano*	'(I) speak Italian'
	parl-i	'(You) speak'
	parl-a	'(She) speaks'
(2)	*habl-o Espanol*	'(I) speak Spanish'
	habl-as	'(You) speak'
	habl-a	'(She) speaks'

(Alexiadou 2006:130, 143)

Since Perlmutter's (1971) initial observation of this phenomenon, the notion of null subject (pro-drop) has been one of the subjects of debate among generative syntacticians. This phenomenon received considerable attention during the Government and Binding (GB) era. One aspect which has contributed to the debate is the Extended Projection Principle (EPP). EPP claims that a grammatical clause should have a subject in its structural position (Chomsky 1981). Some, however, have argued that the structural position of a subject in the null subject languages may not have been projected in the first place (e.g., Borer 1986; Alexiadou & Anagnostopoulou 1998; Roberts 2010).

This begs some questions. Do Italian and English have the same underlying syntactic structure for subjects? Or is the difference just a matter of overt syntactic variation? If there is indeed a variation across languages at the deep structure level, how come the native speakers of Italian and English have the same knowledge that clauses like (1) or (2) are grammatical regardless of the phonological representations.

Within generative tradition, this fact has long been dealt with under the Principles and Parameters (P&P). P&P suggests that all languages have certain principles that are universal and can be acquired by children. At the same time, there is a variation among languages that are constrained by parameters from which learners (children) can make a selection according to which languages they expose to (Chomsky 1995 Ch 1; Lasnik & Lohndal 2009; Bošković 2013; Chomsky 2007). One example of the principles is Theta *Criterion* (Chomsky 1981:36) frame clause structures. In terms of parameters, some languages like English may have positive value for the overt realization of subjects, whereas others like Italian may have it set for a negative value. Building on P&P, it has been assumed that the underlying grammar of all languages remains the same and is part of the innate capacity of language learners across languages (i.e., universal grammar). What appears to be varied is the surface structures.

The latter tenet has led generative scholars to propose a range of parameters (i.e., conditions) to explain the appearance of null arguments in finite clauses. One popular proposal in the 1980s that still receives support in recent literature is the rich agreement hypothesis (e.g., Taraldsen 1980; Chomsky 1981; Rizzi 1986; Borer 1986; Jaeggli and Safir 1989). According to the hypothesis, languages that can omit subjects have a rich

agreement paradigm. By this, null subject languages should have verbs that agree in person, number, or gender (i.e., ϕ-features) with the subjects.

This approach seems to perfectly explain the appearance of null subjects in languages like Italian and Spanish, but it fails to do so for languages like Chinese or Japanese. Chinese and Japanese have verbs that are not inflected with agreement markers, but they do allow null subjects, not to mention null objects. The fact that they drop these arguments regularly has been assumed to be caused by rich discourse context (Huang 1984). Given that, the agreement-based condition proposed under the rich agreement hypothesis is not relevant. Jaeggli & Safir (1989:29) then proposed what is known as *the Morphological Uniformity* condition. The condition posits that null subjects appear in languages whose verbs are either inflected or not with agreement morphemes. As the name suggests, it correctly predicts the appearance of null subjects in Italian and Chinese. Verbs in Italian are always inflected with agreement markers, whereas Chinese are not but they allow null subjects.

However, further studies have shown that the parameter cannot be maintained even for languages that have verbal agreement. For example, although German and Finnish have rich verbal agreement paradigms, they do not omit pronominal subjects. German only allows expletive subjects to be dropped as in (3), whereas only the 1st and 2nd person pronouns can be dropped in Finnish. The omission of the null 3rd referential pronouns in this language is largely restricted as shown in (4b).

(3) Gestern wurde (*es) getanzt. (Roberts & Holmberg 2010:8)

Yesterday was (it) danced.

'Yesterday there was dancing.'

(4) a. pro *reputin historian kokeessa* (Gutman 2004:464, ex.2a,c)

failed-1ST-SG history's in-test

'(I) failed the history test.'

b. *pro *reputti historian kokeessa*.

failed-3RD-SG history's in-test

'(He)/(She) failed the history test.'

(5) pro *nixshalti ba-mivxan be-historia*. (Gutman 2004:464, ex. 3a)

failed-1ST-SG in-the-test in-history

'(I) failed the history test.'

Various restrictions on allowing null subjects are also observed in some other agreement languages (e.g., Hebrew, Arabic, Russian). These languages have restrictions that are mainly based on word order and tense formation. Like Finnish, Hebrew typically allows the dropping of the 1st and 2nd person pronouns. However, the 3rd person pronouns can only be omitted in the past or future contexts, as shown in (5). This is because verbs in Hebrew are not inflected with any agreement morphemes if the structures are in the present tense (Alexiadou 2006; Vainikka & Levy 1999). Arabic has both VSO and SVO orders. Only in the former structure can the referential subject pronouns be dropped (Ackema et.al., 2006).

Since the introduction of the Minimalist Program (MP), parameters of pro-drop languages seem to have reached a different stage. The program rests on the principle that a linguistic expression can function optimally in two "cognitive systems: the articulatory perceptual system A-P and the conceptual-intentional system C-I" (Chomsky 1995:219 Ch 4). In other words, an optimal expression should be expressible at the phonological

and semantic levels which is generated by syntactic computation (i.e., Merge). At this point, the variation may not be related to what can or cannot be allowed on the surface but to properties that enter a derivation encoded within a lexical item (van Gelderen 2013:7). Accordingly, the difference in the phonological representations among pro-drop languages may be determined by the strength of grammatical features (e.g., functional heads). This has motivated recent scholars to propose feature-based conditions for the appearance of null subjects/objects (e.g., Alexiadou & Anagnostopoulou 1998; Sigurðsson 2011; Roberts 2010; Holmberg 2005; Frascarelli 2007).

Apart from the transition from GB to MP in this regard, this all indicates that the parametrization of pro-drop languages may develop as more data from different languages are presented. Thus, this study assumes that extending pro-drop investigation to a broader range of languages is necessary to better describe (i.e., parametrization) pro-drop behaviors across languages. It is necessary to note that the pro-drop parameters discussed in the literature so far have been based heavily on the well-spoken or well-studied languages. Many languages in the world are minority languages that are in danger of disappearing. Extending the venture to these languages may contribute to enriching pro-drop literature while helping the minority languages grow in the academic circles.

Maybrat is a minority language in Indonesia that typically drops subjects and objects. To the best of my knowledge, this fact has never been discussed in the generative literature which merits an investigation. Unlike the asymmetry of pro-drop displayed by the languages discussed above, Maybrat has pro-drop (henceforth, null subject or null object) that appears in clauses that are both inflected and uninflected with ϕ-agreement markers.

(6) *t-aut ara*
1S-climb tree
'(I) climb tree.'

(7) *m-ahe ana*
3U-see them
'(she) saw them'

(8) *ø-wasik ora sau*
ø-clear garden one
'(I) clear a garden'

(9) *y-no Ø ninaan sai*
1SM-do at.random just
'(He) just did it carelessly.'

(10) *rae m-kias m-awe Ø m-fot Ø oah tiaen*
They 3U-tell 3U-say 3U-catch already formerly
'They said that (they) already caught (him) earlier.'

As can be seen, the inflected verbs in (6), (7), and (9) and the uninflected one in (8) appear without overt subjects. The inflected verbs only agree fully (in person and number or gender) with the 1st and 2nd but not with all the 3rd person pronouns. Only the third person pronoun with singular masculine features receives full agreement. The third-person form with singular feminine features as in (7) is underspecified. It agrees with the verbs in person but not in number or gender. (9) also has a null object which is grammatical only if the context is available, as is the null object in (10) and null subject in (8).

The examples show that Maybrat pro-drop behaviors and the agreement paradigm are distinct and may need to be approached differently. Besides, this suggests that rich agreement may not be held as the single condition for the appearance of null arguments.

Although it may suggest, otherwise, that context may motivate the omission of the arguments, it, too, should not be the only condition. Verbs with the underspecified markers as in (7) and (10) still retain the person feature. Thus, in this study, an alternative approach is offered to address the types and distribution of pro-drop. This study is expected to contribute to the theory of pro-drop by (1) describing the types and contexts where null subjects and null objects in Maybrat appear; (2) providing an alternative analysis of the conditions that trigger the appearance of the null arguments; (3) proposing a way in which languages like Maybrat can be put into the current theory of pro-drop. Apart from the theoretical benefits, the study also contributes to documenting and preserving Maybrat spoken texts.

1.2. Overview of the Proposed Account

Although agreement-based analysis of pro-drop may not be applied widely to any agreement languages, it is necessary to note that Rizzi's (1986) account has contributed significantly to explaining the structural position and identification of *pro*. Rizzi (1986) proposes that Agr head (i.e., agreement morpheme) licenses the structural positions and identifies the content (ϕ-features) of null arguments within its government domain. By this, the head (Agr_s/T) assigns a nominative Case position to a null subject and possibly an accusative position to a null object by the head (Agr_o/*v*). In addition, a *pro* can be identified by the presence of an agreement head that has the matching ϕ-features.

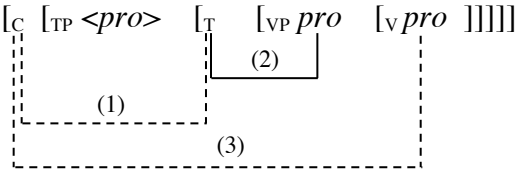
Rizzi's proposal appears to work well in explaining the appearance of null arguments in Maybrat in two respects. First, the null subjects and objects always appear in their structural Case position (i.e., preverbal and post-verbal in SVO order); Second,

null subjects that appear in the clauses with the inflected verbs as in (6) and (9) can be identified by means of the agreement markers. However, such identification is not totally successful with the null subjects in clauses like (7) and (10). The inflected verbs in these contexts have underspecified agreement. The null subjects would have arbitrary interpretations as a result. They can be identified as having either singular masculine, plural human, or inanimate features.

In this study, I propose that the interface between syntax and discourse manages the appearance of null arguments in Maybrat. This is to say that the appearance of null arguments can be conditioned by either agreement features, discourse features, or the combination of the two properties. Building on the Minimalist framework of Agree (Chomsky 2000; 2001), I assume, following Holmberg 2005, that *pro* can be a weak pronoun with an unvalued definite feature (i.e., D-feature). It needs to enter an Agree relation where a functional head (T or C) with a valued D-feature values it. Once completed, *pro* gets a full interpretation at LF. Otherwise, the derivation crashes.

For example, in the case of null subjects in (7) and (10), they are weak by the fact that the agreement heads lack the full ϕ-features. The heads can identify the person feature, but they cannot do so for the number or gender features of the *pros*. Following Miyagawa (2010) and Holmberg (2005), I propose that T inherits D-feature along with ϕ-features from C, enabling it to carry out a valuation of the D-features of *pro*. In terms of null subjects in structures like (8), the functional head T lacks D-feature and ϕ-features. The complete features can be satisfied by inheriting them directly from C. This also holds for null objects in clauses like (9) and (10). In the spirit of the minimalist principle of locality, I assume that a null topic is present at the left periphery of the sentences that

mediates the inheritance of the relevant features (e.g., topic, ϕ-features) from C to *pro*. As for null subjects in (6) and (9), they are strong *pros* that can be associated with full DP. The verbal agreement heads (T) have full ϕ-features that match those of the *pros*. The *Agree* relation in this context involves only *pro* valuing the uninterpretable ϕ-features of T. The proposed framework for the three *Agree* relations can be described as follows.

(11) 

Relation (1) shows the inheritance of discourse features (ϕ-features, D-feature) from C to T to identify the underspecified null subjects. (2) represents the regular *Agree* relation (spec-head agreement) between T and *pro* where the uϕ-features of T are valued. (3) displays a direct *Agree* relation between C head and a null subject that appears in clauses with the bare (uninflected) verbs. The same holds for the identification of the null objects. The link between (1) and (2) indicates the combination of morphosyntactic and discourse properties in promoting the appearance of null arguments.

1.3. Methodology

This section describes methods of data collection. In general, the study was based on the primary and secondary data. The primary data were gathered through translation/elicitation tasks and interviews in two phases or designs: the remote study and fieldwork. The secondary data were obtained from Dol's (2007:245-291) collection of stories in Maybrat. There are three stories in the collection totaling 2,503 words. From

the three stories, 1,313 tokens (i.e., instances of both lexical and pronominal subjects/objects) were generated, consisting of the referential pronouns (overt/null) and the lexical subjects/objects.

1.3.1. Remote Study

The remote study was conducted to gather preliminary data on the appearance of null subjects and null objects in Maybrat. The study used WhatsApp platform to communicate with 4 Maybrat speakers who live in Sorong, Jayapura, and Nabire (three regencies in West Papua). Since all speakers who participated in the study are fluent in Maybrat and Bahasa Indonesia, they were asked to translate 50 items (including sentences and paragraphs) from Indonesian to Maybrat. The items consisted of 44 sentences (including simple, matrix, and complex clauses), four two-line dialogs, and two short paragraphs. For ease of use, the 50 items were divided into 10 items for the first three speakers and 20 items for one speaker at her request. The lists were sent out in PDF format to the speakers via their WhatsApp contacts, which I acquired during a field trip in 2019. All instruments were sent in August 2020 along with the instructions. By the end of October 2020, I received them in their Maybrat versions.

Based on the data from the translation task and Dol's (2007) corpus of spoken texts, I developed more sentences for further judgment by the speakers who participated in the translation task. For example, many of the translated sentences in Maybrat had overt subjects and objects. I modified them by omitting the pronominal subjects or objects. Then, I asked the speakers to judge whether they were acceptable or not. I should note that there was no specific design for the judgment task since all processes were done

through the personal communication. This phase became an ongoing compilation of sentences or concordance as the online communication progressed until the beginning of January 2022.

1.3.2. Fieldwork

The fieldwork was conducted to gather data on how Maybrat speakers construct sentences in a natural (connected) speech. The fieldwork took place from March to July 2021 in Sorong, a regency in Papua Barat Province of Indonesia.

Source: https://www.cia.gov/the-world-factbook/countries/indonesia/map

The main activity in this fieldwork was recording the speakers when they were telling stories in Maybrat. Although the speakers are fluent in Maybrat and Bahasa Indonesia, I decided to carry out all the interviews in Maybrat. For this reason, I recruited 3 native speakers who were also my contact persons to help translate the questions that I would ask during the interviews. There are two advantages of doing so. First, it mitigated the researcher or *observer effect* (Schilling 2013:112), an effort to reduce a condition where a language consultant is aware of being in a research context. Second, since all my

contact persons are close relatives of the language consultants, they could engage in deep conversations during the interviews without being aware of my presence or being recorded.

The interview questions ranged from daily activities through traditional or local-based stories. They included topics such as food processing, life in the past, daily routines, myths, legends, and genealogy. For practical reasons, I shared and discussed the questions with the contact persons before the interviews during which one suggested that they needed to decide to whom which topics would be asked. As a result, some questions or topics could be covered during the interviews with some speakers, whereas, with others, only a few stories could be recorded. In addition, this was due to some obligations that the speakers had to accomplish on the days of the interviews. Equally important is the fact that the interviews were limited since the local government restricted movements to prevent the spread of Covid-19 at that time. Subsequently, some interviews were conducted in just one visit.

There were no standard recording devices used during the data collection. Most of the interviews were recorded using a Sony ICD-TX650 digital voice recorder. The rest were completed using the interpreters' or the consultants' smartphones. One consultant (FT) could not be present in Sorong during the fieldwork but was willing to record herself telling a story using her cellphone. I am grateful that all the recordings they made were in good condition when I received them. There are 18 stories elicited from the interviews consisting of 6 stories narrated by each consultant. Some are short whereas others are considerably longer which take 90 minutes altogether. The data processing of the stories came up with 10,485 words and 3,822 tokens (sentences/clauses).

1.3.3. Language Consultants

Language consultants are the native speakers of a language who are involved as a source of language data. There were 9 language consultants involved in this study who are members of the Mayhapeh (dialect) community. They were all between 25 and 67 years old at the time of the recordings. 5 speakers who participated in the remote study (MT, ET, FT, PT, YW) grew up in Ayawasi. Except for ET, the rest of the speakers live and work outside Sorong with frequent visits to Sorong and Ayawasi during short or long holidays.

The fieldwork interview involved 4 native speakers (FT, LT, RT, MW). They grew up and have spent most of their lives in Ayawasi, except for FT. She has lived in Jayapura since she finished her college degree. The rest of the speakers visit Sorong on a regular basis. All languages consultants have jobs, except for LT, RT, and MW who are traditional farmers.

1.3.4. Data Processing

1.3.4.1. Translation Task

Data gathered from the elicitation/translation tasks were processed in the following ways. All the sentences from the translation activities and those that I developed and consulted with the speakers were compiled into a concordance. There are 150 sentences altogether, including the paragraphs and two-line dialogs from the translation task. Once compiled, I provided interlinear glossing to all sentences. Since sentences that the speakers translated were free translations (i.e., not word-for-word translation), I carried out further glossing in three ways. First, using my knowledge of the

language, I went over each sentence and provided a word-for-word translation. Second, during this process, I continuously communicated with the speakers (i.e., translators) to verify the literal translations I had made. Some parts in this process involved sending out a list of sentences to the speakers, whereas others were done using the chat communication. As soon as I received the speakers' comments on the word-for-word translation, I provided a complete interlinear glossing to all sentences.

Following the interlinear glossing, I marked where the referential pronouns were used (overt or null) either in subject or object positions. I also marked the types of verbal clauses, including the inflected and uninflected verbs. In this phase, the data processing focuses on the grouping, glossing, and coding of all sentences to support the analysis of the types and distribution of null arguments in Maybrat. Nevertheless, I continued with simple calculations for the frequency of the distribution of pronominal pronouns, which I discuss in the following section.

1.3.4.2. Interview

Data gathered from the fieldwork interview were processed in the following stages. First, I asked a native speaker (DT) to collaborate with me in transcribing and translating all recordings into Bahasa Indonesia. This plan did not work well because he preferred to do the work independently. I need to note that the recruited transcriber was not one of the language consultants recruited for the translation task and the interviews. At the beginning of July 2022, I received all transcriptions of the recorded narratives. Nevertheless, there were still some missing parts here and there in the transcriptions. This

led me to go over all the recordings and transcriptions and complete the rough transcriptions which came to be the second stage.

The third step was having some native speakers verify the transcriptions that I had made. I sent the rough transcriptions to three other speakers who were part of the remote study. At this point, all sentences in the glossed transcripts had three lines which consisted of Maybrat in the first line, followed by word-for-word translation and the idiomatic translation in Bahasa Indonesia in the third line.

After receiving their feedback, I made the final interlinear glossing. During this process, I continued the online communication with the speakers to discuss the glossed transcripts. In certain occasions, it involved discussing the meanings and functions of specific words since they are not listed or described in the glossary that Dol (2007) provided previously. Next, I provided a simple descriptive information on the appearance of null subjects and objects in the stories. This was done similarly to coding the instances of both null and overt referential pronouns in the data gathered from the remote study. However, it only included the types of verbal clauses where null or overt pronouns were found. I also looked at the frequency of the appearance of lexical subjects and objects. The purpose of doing so was to present a simple quantified description on the types and distribution of null arguments in Maybrat to support the analysis. The description of the appearance of the lexical, pronominal, and null arguments in the stories is shown in the following tables.

Table 1

Forms of Arguments Overall

Lexical		Pronominal		Null		Total
Subject	*Object*	*Subject*	*Object*	*Subject*	*Object*	
577 12.41%	716 15.39 %	278 5.98%	102 2.19%	2138 45.97%	840 18.06%	4651 100%

Table 2

Frequency of Null Subjects by Verbal Clauses

Clause type	Lexical	Pronominal	Null	Total
Fully inflected	85 2.84%	169 5.65%	903 30.17%	2993 100%
Partially inflected	397 13.26%	64 2.14%	859 28.70%	
Uninflected	95 3.17%	45 1.50%	376 12.56%	

Table 1 shows that out of 4651 arguments, null forms rate higher than the lexical and pronominal forms (overt forms). Among the null forms, null subjects appear higher (45.97%) than the null objects (18.06%). Table 2 shows that out of 2993 subject forms, null subjects appear more frequent in clauses with full agreement (i.e., person, number, gender), followed by those with partial and no agreement. One may assume that agreement contributes much to the appearance of the null subjects from this data. It should be noted that other factors (variables) may contribute to the number of occurrences. For example, Maybrat discourse is full of figurative styles where speakers frequently repeat words or clauses from the previous clauses, known as *tail-head linkage*

(Dol 2007:241). Besides, most sentences or expressions are structured by serial verb constructions where a single verb is the main verb that takes arguments.

1.3.5. Transcription and Conventions

In this study, I use interlinear glossing for all sample sentences from the remote study and the transcriptions of the stories. The glossing consists of three lines. The first line is the original sentence in Maybrat that has been broken into morphemes. The second line is the morpheme-by-morpheme gloss with the abbreviated grammatical description. The third line is the English translation which is mainly idiomatic to give a meaningful context of a sentence or expression. Conventions for the coding or the abbreviated grammatical properties in the morpheme-by-morpheme gloss generally follow Leipzig glossing rules. However, in many contexts, I also referred to Dol's (2007) glossing techniques, abbreviations, and conventions for the sake of consistency.

1.4. Organization of the Dissertation.

Chapter 2: Morphosyntactic sketch of Maybrat. This chapter gives an overview of certain morphosyntactic aspects in Maybrat. It discusses the main aspects that are relevant to the appearance of null arguments. It includes, for example, the pronominal system, verbal morphology, and clause structures in Maybrat.

Chapter 3: On null arguments. It provides the theoretical background of null arguments that overviews the notion of arguments and null arguments as well as the typology of null arguments. It also discusses some previous theories on the conditions that promote the appearance of null arguments, including those proposed under the GB theory and the Minimalist Program. The chapter continues with the transition of pro-drop

theory from the GB era through the Minimalist Program. It also reviews the current null subject parameters under the Minimalist framework (e.g., Biberauer et al. 2010; Holmberg 2005).

Chapter 4: Typology of null arguments in Maybrat. The chapter provides a description of the types and distribution of null subjects and null objects in Maybrat. It discusses the types of pro-drop that appear in different sentential contexts. It includes the appearance of pro in simple/complex sentences or matrix/embedded clauses. All sentences exemplified in this chapter are taken from either the concordance or the transcripts of the fieldwork interviews.

Chapter 5: Analysis. This chapter focuses on the formal analysis of the appearance of null subjects and null objects in Maybrat. The analysis applies the minimalist framework of *Agree*, which sees the identification and licensing of null arguments as part of the feature agreement. The analysis includes the derivation of *pro* in several contexts (e.g., *pro* in clauses with inflected vs. uninflected verbs). The chapter also proposes a unified account of the appearance of the third person *pro* in Maybrat.

Chapter 6: Maybrat and other pro-drop languages. It serves to answer the third objective of this study. That is how Maybrat is situated in the current theory of pro-drop. This chapter reviews the current pro-drop parameters proposed by recent scholars (notably Biberauer et al. 2010) as the basis for classifying Maybrat into the current pro-drop theory. Evidence from Maybrat, as discussed in the previous chapters, is presented, and argued for and against other pro-drop languages. The chapter concludes with a summary of the status of Maybrat in view of the current theory of pro-drop.

Chapter 7 provides the conclusion of the study and the entire dissertation. It also offers some recommendations for future studies and practical implications concerning studies on Maybrat and other Papuan languages.

CHAPTER 2

MORPHOSYNTACTIC SKETCH OF MAYBRAT

2.1. Introduction

Maybrat is one of Papuan languages in the Bird's Head Region of West Papua with around 20,000 to 22,000 speakers (Whalen & Simon 2012; Brown 1991). It is also the name of the people and an administrative region in Papua Barat Province of Indonesia. Maybrat is spoken in six dialects: Mayhapeh; Mayasmaun, Karon, Maymare, Maymaru, and Mayte (Dol 2007:9), which are found mainly in *Kabupaten* Maybrat (equivalent to a regency). Karon speakers may be considered a minority among the speakers of these dialects since they live in areas outside *Kabupaten* Maybrat (i.e., *Kabupaten* Tambrauw) and are surrounded by different majority languages (e.g., Abun).

In terms of vitality, Maybrat has been identified as a safe language according to the current data from the Indonesian government. However, the number of speakers may have shifted gradually due to the current developments in the areas. Since Brown (1991) identified that there were 22,000 speakers, there have not been any recent publications on the actual number of the speakers. During her fieldwork, Dol (2007) reported that most Maybrat people were already fluent in Maybrat and Indonesian. My field trip to one of the regions has indicated that the number of the bilingual speakers may have increased as the parents are reluctant to speak in Maybrat to their children at home. This confirms Whalen & Simon's (2012) recent study that has classified Maybrat as a potential endangered language.

Several linguistic studies have been done in Maybrat. Many of which were carried out within the collaborative work between Universitas Cenderawasih and the Summer

Institute of Linguistics (SIL) around the 1980s and 1990s. During this period, many publications were made and focused on creating reading materials. By the end of the 1980s, several extensive works had been conducted to describe the language (e.g., Brown 1990; Brown 1991; Dol 1997; Dol 1996). This all culminated in the publication of a comprehensive description of Maybrat grammar by Philomena Dol in 2007 based on her fieldwork between 1993-1996 in Ayawasi (located in today's *Kabupaten* Maybrat).

In this chapter, I review some aspects of the morphology and syntax of Maybrat that are relevant to the syntax of pro-drop. Much of the discussion is based on Dol's (2007) description. The discussion includes but is not limited to the pronominal system, noun phrases, verbs, and different types of clauses in Maybrat. All examples discussed in this chapter are taken from the concordance and the transcripts of the fieldwork interviews.

2.2. Pronouns

2.2.1. Personal Pronouns

Maybrat personal pronouns have different forms for three persons and two number features. Gender feature is marked only for the third singular masculine form *ait*, whereas it is underspecified for the third feminine pronoun *au*. The underspecified form is generally used for any referents with feminine human singular or non-human (i.e., animals) features as shown in (2ab). Such an underspecified element is displayed further by the agreement markers of the verbs discussed in Section 2.4. The pronominal system of Maybrat is shown in (1) (from Dol 2007:62).

(1) Personal Pronouns

Singular	1	*tuo*
	2	*nuo*
	3M	*ait*
	3U	*au*
Plural	1	*amu*
	2	*anu*
	3	*ana*

(2) *a*. *fnia au m-roh m-awe*

woman 3U 3U-go.down 3U-fall

'The woman fell.'

b. *fane au m-hoh*

pig 3U 3U-run

'The pig ran.'

The plural forms can be distinguished in terms of whether they include the addressee (inclusive) or not (exclusive). The form *ana* always refers to some other parties excluded from the speaker and the addressee. The form *amu* is the exclusive form since it may refer to the speaker and some other parties as in (3b). The form *anu* refers only to the addressee as in (3a). However, in some contexts, it can be inclusive too. Dol (2007:64) notes that one way to distinguish between the inclusive and exclusive use of the form *anu* is by looking at a prefixed verb that follows it. Unlike in (3a), the verb in (3b) has the first-person plural marker which indicates the inclusive use.

(3) a. *anu n-mo t-o n-not n-po ita ø-waro*

2P 2-go near-U 2-think 2-hold leaf ø-little.bit

'[When] you go, remember to bring some money.'

b. *amu p-mo p-he rae s-ait ø-kiyam.*

1P 1P-go 1P-see man one-3M ø-sick

'We (excl.) go to see a man who is sick.'

c. *anu p-kah ora m-aku sai*

2P 1P-think garden 3U-small just

'We (incl.) only work on a small garden.'

In addition to the plural form, Dol (2007:65) identifies that Maybrat speakers also use the dual pronoun *paen*. Unlike the other pronouns, it can only occur in subject positions. When it appears post-verbally, it may emphasize the subject.

(4) *a. paen n-hu ø-sete te-f-o*

dual 2-stay ø-wait area.N-very.near-U

'The two of you stay here.'

b. amu p-hu amah paen

1P 1P-stay house dual

'We stay at house, the two of us.

Maybrat personal pronoun system is a single-person paradigm in terms of the syntactic position. The same pronominal form is used in different syntactic positions (i.e., no grammatical Case position). As can be seen in the following examples, the form *ait* appears in the object and subject positions in (5) and (6) respectively.

(5) *amu p-mo p-he* ***ait*** *ro ø-kiyam*

3P 3P-go 3P-see 3M REL ø-sick

'We went to see the man who is sick.'

(6) ***ait*** *me-f-o* *y-hu* *amah ø-kiam*

3SM PRESTT-very.near-U 3M-stay house ø-sick

'He is now staying at hospital.'

2.2.2. Possessive Pronouns

Possessive pronouns modify the nouns that select them. Possessive pronouns in Maybrat are formed by inflecting the possessive form *ro* to the full pronoun forms. The possessive form is mostly reduced when conjugated, especially for pronouns with vowel-initial sound.

(7) *rae ø-skie amah* ***r****-ait*

Man 3U-build house POSS-3M

'People build his house.'

(8) *p-kias mai sai* ***r****-anu mi ku* ***r****-anu m-har*

3P-tell sound just POSS-3P so.that child POSS-3P 3U-know

'We speak with our language so that our/your children know (it).'

In addition, when the possessor is a full-fledged NP (i.e., names or generic terms) as in (10), the full form *ro* is used as an emphasis.

(9) *fane ro Kaspar r-ait m-hai*

pig REL Kaspar POSS-3M 3U-perish

'The pig that Kaspar own's died.'

Dol (2007:66) notes that these possessive forms can function as modifiers but not as subjects or objects of a sentence. My data suggest that they also can be independent in the subject or object position of a sentence. I assume this is possible if the context is accessible to the speaker and hearer and they serve an aphoric relation.

(10) ***r-ait*** *m-of* *m-hai*

POSS-3M 3U-good 3U-perish

'His is very good.'

(11) *ø-smoh* ***r-au*** *kaket* *re* *m-ait*

ø-clean POSS-3U carefully so 3U-eat

'Clean hers well so that (she) eat (it).'

2.2.3. Emphatic Pronouns and Other Forms

Emphatic pronouns in Maybrat are formed by conjugation between the prefix *po-* and the full pronoun forms. According to Dol (2007:67) the form *po-* is equivalent to 'alone or on my/your/etc. own' in English. Some of the examples are *po-tuo, p-amu, p-ana* which are translated literally as 'I myself,' 'we ourselves,' or 'they themselves.'

(12) *Ayawasi m-hu* *p-ana* *tara* (NRT: MW–5/21/2021)

Ayawasi 3U-stay EMPH-3P separate

'(The people) in Ayawasi they live by themselves separately.'

(13) *p-hu* *kar* *p-amu* *fi-t-o* (NRT: MW–5/21/2021)

1P-stay alone EMPH-1P similar.to-near-U

'We live by ourselves; It is like that.'

Unlike the personal and possessive pronouns, these forms cannot be in the subject or object position of a sentence. They usually appear in the post verbal positions and can be preceded or followed by adverbials.

The other forms are composed of the morpheme *po-* and the numerals (e.g., *sau* 'one', *ewok* 'two') which have the same emphatic functions. The inflection creates the forms like *po-s-ait* 'EMPH-one-3M' and *p-eok* 'EMPH-two.' These forms may not agree with the subject. In that case, their functions are better treated as adjectives, equivalent to 'alone.' Like the possessive pronouns, these forms can be in subject position beside modifying NPs as in (15).

(14) *po-s-ait* *t-amo ora* (ECT: ET – 12/12/2021)

EMPH-one-3M 1S-go garden

'I went to garden alone.'

(15) *amu p-eok* *p-mo pasar* (ECT: MT – 12/12/2021)

3P 3P-two 3P-go market

'We two go to market.'

2.3. Noun Phrase

Noun phrase is a phrase composed of a noun or pronoun head and its complements or modifiers. It generally is situated in the structural subject or object positions. A noun phrase in Maybrat is formed either by a noun head which takes a kinship term, an adjective, or an attributive noun as the modifier (Dol 2007:128).

2.3.1. Regular NP

The two common forms of noun phrases in Maybrat are the inalienable and alienable possessed nouns. The former is associated with possession that cannot be separated from the possessor (e.g., body parts) whereas the latter can (e.g., one's car). Body parts, kinship terms, and spatial nouns are treated as inalienable possessions (Dol 2007:84). The possessors of these kinds of nouns are generally marked with the person prefixes as shown in (16), (17), and (18), respectively.

(16) *t-atem m-ata*
1S-hand 3U-hurt
'My hand hurts.'

(17) *n-ao y-anes*
2N-brother 3M-old
'Your older brother.'

(18) *amah m-aom*
house 3U-outside
'The outside of the house.'

As for the alienable nouns, the possessors are not marked morphologically. They usually take the possessive form *ro* to identify the possessor. As a modifier, the form always precedes nouns (Dol 2007:89).

(19) *amah* ***ro****-Beni*
House POSS-Beni
'Beni's house.'

(20) *fnia* ***r-anu*** *me-f-o*

woman POSS-2P PRESTT-very.near-U

'Our today's women.'

A noun phrase composed of a noun modified by an adjective is also prevalent. It mainly involves adjectives with the person inflections.

(21) *fane m-apo* ***ru*** ***m-auf*** *m-kak*

Pig 3U-eat.meat bird 3U-content 3U-everything

'The pig eat all the eggs.'

(22) ***mtah ø-knu*** *mati* *ø-skoh*.

dog ø-dark and.then ø-like

'It is a black dog that I like.

Some noun phrases comprise the prefix *po-* and adjectives or nouns as in *po-knu* 'thing-dark' (morning) or *po-watum* 'thing-advice' (advice). In many contexts, a noun phrase may be composed of a noun modified by another noun as the possessor (25).

(23) *po-knu* *t-ama* *p-mo* *ø-tawer* *aya* *ø-sia* *n-ao* *Paskalis*

thing-dark 1S-come 1P-go ø-fish water ø-with 2S-brother Paskalis

'(In the) morning, I come and we go fishing with your brother Paskalis'

(24) *amu p-ri* *po-watum* *kaket*

1P 1P-hear thing-advice carefully

'We listen carefully to advice'

(25) ***mai*** ***r-anu*** *men* *ø-sruor* *m-akus*

Sound POSS-3P tomorrow ø-release left.behind

'Our language, later it is left behind totally.' (NRT: LT-5/18/2021)

An NP can be formed by two nouns, one of which functions to modify another. The attributive noun always comes after the head noun.

(26) *y-ama ø-hren te-au m-nan*[1] ***rae sriem***

3SM-come ø-sit area.N-U.Dist 3U-enough man invite

'(He) came and sit there like **a guest**.'

(27) ***fane rapuoh*** *ø-twok m-ait awiah ø-prut*

pig forest ø-enter 3U-eat taro everything

'**Wild pig** entered [garden] and ate all taros.'

Other types of NPs are the complex ones where each comprises a head that is modified by a relative clause as in (28) or a demonstrative and quantifying form as in (29).

(28) ***fnia ro Wenan y-emen*** *m-hai*

Woman REL Wenan 3SM-marry 3U-die

'Woman who Wenan married has died.'

(29) *N-he* ***saa m-ana re-t-o*** *ø-waro p-ka* ***awiah m-aku f-o***

2S-see fish 3U-head area.N-near-U ø-little 1P-mix taro 3U-small very.near-U

'Find a little bit of fish head and we eat (it) with this small taro.'

In some contexts, a modifying relative clause can be very complex. The structure may consist of a range of verbs that describes a noun head.

(30) *t-ama t-he fnia* ***ro*** *Beni y-kias y-awe y-amo y-he*

1S-come 1S-see woman REL Beni 3SM-tell 3M-say 3M-go 3M-see

[1] The form *m-nan* has three functions. It is a connector, equivalent to 'and then' as in (74), an adjective meaning 'enough,' and an adverb that expresses similarities or examples as in other examples that is usually followed by the form *fi-re* 'similar.to-PART'.

re men y-men t-o

so.that tomorrow 3M-marry near-U

'(I) come to see the woman who Beni told (me) that he wants to see so later he marries.'

2.3.2. Bare NP

While in some contexts an NP in Maybrat has a modifier or determiner, a noun can be on its own as a bare NP in many other contexts. Bare NPs have semantic references that are indefinite or unspecified (Lyons 1999). Thus, they can be understood as singular/plural or definite/indefinite and mainly identified by a given context. In Maybrat, they include the impersonal forms like *rae* 'man', *fnia* 'woman', *ku* 'child,' or other nouns (e.g., *fane* 'pig', *ora* 'garden', *ara* 'tree').

(31) *Ees* ***rae*** *m-ama t-o m-ama iso Kokas.*

formerly man 3U-come near-U 3U-come road Kokas

'Formerly, [when the] people come, [they] come by road to Kokas.'

(NRT: RT – 4/21/2021)

(32) *Amu p-roh re-t-o ø-waro ø-fri* ***fnia*** *fe.*

'1P 1P-go.down area.N-near-U ø-little ø-meet woman Neg'

'[When we get down, we can't meet a woman (wife) a little bit.'

(NRT: LT – 5/18/2021)

The nouns *rae* and *fnia* in (31) and (32) are specified, but they may not be definite in these contexts. The form *rae* in the example refers to some people who came to arrest Yepoh in the story. The noun *fnia* is understood as the wives of the male participants of

the initiation rite told by LT. Once the initiation rite is completed, the men cannot meet their wives immediately.

2.4. Verb

Verbs in Maybrat generally have two morphological forms. The first type is inflected with pronominal prefixes as shown in (33) for the regular forms and (34) for the quantifying verbs. The second one appears as bare verbs as in (35) and (36).

(33) *tuo* ***t****-amo t-som* ***bola***[2]

1S 1S-go 1S-play ball

'I want to go and play soccer.'

(34) ***m****-siar m-ama m-no p-awia?*

3U-many 3U-come 3U-do thing-who

"Many of them come for what?'

(35) *ø-knu m-nan fi-re sohesan*

ø-dark 3U-enough similar.to-PART charcoal

'It is black like a charcoal.'

(36) *ø-smi amah m-api*

ø-dream house big

'[She] dreamt [about] big house.'

According to Dol (2007:53) each verb, especially the inflected one, can appear as an independent clause since a person prefix can function as the argument of the verb. The

[2] Bold-printed words are Indonesian terms. They should be distinguished from Maybrat words that are bold-printed for explanatory purposes in this chapter.

person prefix has a distinct form for each person form in (1). In fact, the person marker *m-* is underspecified in that it can only agree in person but not in number or gender features. The marker in (34), for example, indicates plurality but it also agrees with the feminine singular pronoun *au* 'she.' The same holds for the adjectives as exemplified in (35) with the uninflected form. The uninflected verbs, too, can appear as independent clauses. Dol (2007:50-53) identifies the types of verbs as verbs with a *covert person prefix* to contrast it with the inflected ones or verbs with an *overt person prefix*.

Dol (2007:50-53) provides the general morphophonological rules for the appearance of the two types of person prefixes. An *overt person prefix* generally appears in verbs with stems consisting of vowel initial sounds. Besides, they should not consist of more than two syllables.

(37)	/t-ate/	[ˈt-**a**te]	'I bathe'
	/m-eu/	[ˈm-**e**u]	'she comes back'
	/n-aim/	[ˈn-**a**im]	'you cook'
	/m-e/	[ˈm-**e**]	'she gives'

A verbal stem with a consonant initial sound can also take an overt person prefix if the inflection results in a consonant cluster and the stem does not exceed two syllables.

(38)	/n-rof/	[ˈn-**r**of]	'you follow'
	/t-nat/	[ˈt-**n**at]	'I examine/try'
	/p-mat/	[ˈp-**m**at]	'We visit'
	/m-no/	[ˈm-**n**o]	'They do'

As for the *covert person prefix*, it usually appears in the following contexts. It is used when a verbal stem consists of more than two syllables. Alternatively, it can appear in a verbal stem that has a consonant sound in the initial position of the second syllable.

(39)	/fayir/	[saˈ**y**im]	‘decorate’
	/hamit/	[haˈ**m**it]	‘bundle’
	/sokuos/	[soˈ**k**uəs]	‘order’
	/peyak/	[peˈ**y**ak]	‘throw away’

2.4.1. Transitivity

The term transitivity is commonly associated with whether a verb takes an object argument or not. So, transitive verbs take objects, whereas intransitive verbs do not. Dol (2007) found that some intransitive verbs in Maybrat behave like transitive verbs. For this reason, this section reviews the verbs in terms of the number of arguments they can take (i.e., valency).

2.4.1.1. Verbs with One Argument

These verbs are the regular intransitive verbs that do not always take objects.

(40) ***p-hu*** *ø-sete rae m-e ha ø-waro p-epo*

3P-stay ø-wait man 3U-give salt ø-little 3U-hold

‘[We] stay and wait for people to give us little salt to bring.’

(41) *Meki ø-**hapot** na y-tien sai*

Meki ø-replete then 3SM-sleep just

‘Meki was satisfied so he just slept.’

Dol (2007:70-75) identifies some adjectives and quantifiers as verbs that can take subjects. The form of the adjectival verbs is similar to the regular verbs in terms of the inflectional rules described previously. That is whether they can take overt person prefixes or not.

(42) ***m-apuf*** *m-nan* *fi-re* *ara te-au*

3U-short 3U-enough similar.to-PART tree area.N-U.Dist

'(It is) short like the tree over there.'

(43) *fane f-o* *ø-**samuoh***

pig very.near heavy

'This pig is heavy.'

(44) *po* ***m-tah***.

thing 3U-bitter

'[This] thing is bitter.'

The same constraints hold for the quantifying verbs. Some of the quantifying verbs have overt person prefixes (e.g., *m-siar* '3U-many') whereas others do not (e.g., *ø-waro* 'little'). Like the adjectival verbs, the quantifying verbs can appear as single clauses whereas others like *ø-waro* 'little' in (48) can not.

(45) ***m-kak*** *oah*

3U-everything already

'Everything is done.'

(46) *y-tu* *rae ana f-o* ***m-siar*** *sai*

3SM-call man 3 P very.near-U 3U-many just

'(He) just call the people who are just many of them.'

(47) ***ø-waro*** *m-ama* *m-pat* *Suswa*

ø-little 3U-come 3U-from Suswa

'Very few (of people) come from Suswa.'

2.4.1.2. Verbs with Two Arguments

In addition to the regular transitive verbs, some verbs like complement taking verbs, causative/directional verbs, and comitative verbs take objects (Dol 2007:75-83). The regular transitive verbs usually involve action verbs.

(48) *Rae ø-fnak ru m-api*

Man ø-shoot bird big

'man shot big bird.'

(49) *Ait y-haif rako*

3SM 3SM-chop firewood

'He chop/cut firewood (with an axe).'

Object complement clauses usually follow the complement-taking verbs. This is usually promoted by perception verbs (51), mental verbs (52), and causative verbs (53).

(50) *m-ari Woi m-kuk*

3U-hear Woi 3U-sing

'[They] hear *Woi* (bird) sings.'

(51) *t-not t-awe ø-pru saa ø-prut*

1S-think 1S-say ø-pay fish ø-everything

'[I] thought we bought every single fish.'

(52) *son m-roh m-ai y-ana*

coconut 3U-fall 3U-hit 3M-head

'[The] coconut fell and hit his head.'

The comitative verb *m-sia* '3U-with' is a preposition that requires a direct object. That form has the underlying meaning of 'along with' or 'to be with.' It can be inflected with different person prefixes. However, in a rapid speech, it is usually pronounced without a prefix as in (55).

(53) *t-amo ø-prus po f-o t-sia ana*

1S-go ø-return thing very.near-U 1S-with 3P

'I go and return this thing with them.'

(54) *ø-sia Petrus p-mo ø-saso krau*

1S-with Petrus 3P-go ø-search bandicoot

'With Petrus, (we) went to hunt bandicoots.'

2.4.2. Verbs with Three Arguments

Certain verbs in Maybrat can appear in ditransitive constructions. The verbs mainly involve giving and causative verbs as in (56) and (58), respectively. In (56) context, an indirect object can be augmented to be the direct argument as in (57).

(55) *t-e pitis ø-okair m-ae ait*

1S-give money ø-little 3U-at 3M

'(I) give little (some) money to him.'

(56) *t-e ait pitis ø-okair*

'1S-give 3M money ø-little

'(I) give him a little/some money.'

(57) *fos m-fi ara m-ai amah sau*

wind 3U-blow tree 3U-hit house one

'[The] wind broke [the] tree and hit a house.'

Other verbs of this category denote direction and usually appear in a sequence of verbs discussed specifically in 2.7. They include the inflected verbs with the roots such as *-etu* 'pour (water)' in (59) and *-ais* 'take somebody along' in (60) or the uninflected ones like *pruk 'pour'*[3] in (61). In many contexts, the prepositional verb *m-ae* '3U-at' can follow these verbs with a similar function and meaning.

(58) *n-tu aya m-pe m-amo* ***branga*** *wia.*

2S-pour water 3U-hot 3U-go cooking.pot before

'pour hot water into cooking pot first.'

(59) *Yepoh y-ais ana m-amo aya Susepoh*

Yepoh take.along 3P 3U-go water Susepoh

'Yepoh took them along toward Susepoh creek.'

(NRT: RT – 4/21/2021)

(60) *ø-pruk po-sten m-ae pron.*

ø-pour thing-fat 3U-at bamboo

'(We) pour corn into bamboo.'

2.4.2.1. Control Verbs

These verbs are higher clause verbs that control the null subjects (i.e., PRO/pro) of complement clauses (van Gelderen 2017:68). Control verbs may be classified as verbs

[3] *ø-pruk* is used specifically for seed-like food matterials (e.g., corn kernels).

that take two arguments in which the direct objects are usually the complement clauses. In Maybrat, control verbs include the telling verbs like ø-*sokuos* 'order', -*pies* 'order', -*awe* 'say', and -*kias* 'tell'.

(61) *rae ø-sokuos fnia ø-saruk po m-kah pokuo.*
man ø-order woman ø-cook thing 3U-with feast
'Men asked women to prepare food for feast.'

(62) *m-kias ku kiniah m-amo m-aret popat.*
3U-tell child small 3U-go 3U-pick vegetable
'They told children to go and pick vegetables.'

2.5. Demonstratives

Demonstratives related to how speakers view a spatial relation with regard to the proposition they are making. They can be proximate (near) or distal (far) from the speaker's point of view (Diessel 1999:2). Maybrat demonstrative forms are composed of complex morphemes that display three spatial relations. In general, they can be identified in three inflectional forms: -*f-* (very near e.g., *re-f-o*), -*t-*(near e.g., *re-t-o*), -*n-* (far distance e.g., *ro-n-o*), and -*au* (unspecified distance) (Dol 2007:96). The demonstratives also can function as the subject or object of a sentence when the context has been established as in (66).

(63) *Serek ø-sia* ***jajaran*** *r-ait m-hu ro aya tum ro ete*
Serek ø-with ranks Poss-3M 3U-stay REL water mud REL below
*re-**f**-o.*
Loc.Spec-very.near.U
'Serek and his ranks lived where the muddy stream down here.'

(64) *rae m-nan fi-re ø-sokuos po-n-o re-**t**-o.*

Man 3U-enough similar.to-PART ø-order thing-far-U Loc.Spec-near-U

'It is like, the people order that thing (of a ritual).'

(65) *m-e ana Wafom ro ro-te ro Truko to-**n**-o.*

3U-give 3P Wafom REL POSS-below REL Truko Loc-far-U

'They give (it) to those of Wafom who live down there at Truko.'

(66) *re-t-o m-amo **baru** rae m-o ratau m-pu.*

Loc.Spec-near-U 3U-go **and.then** man U3-take scrapings.of.plants 3U-cover

'That goes (first) then people take scrapings of plants and cover (it).'

(NRT: MW-5/21/2021)

2.6. Clause Structure

It has been shown that a single verb in Maybrat can form a simple clause whether it is inflected with a pronominal prefix or not. In terms of a complex sentence, the main clause is generally modified by either an adverbial, relative, or conditional clause. The complex structure may also involve a coordinate clause where the grammatical elements like *mati* 'and then' can be the syntactic marker. Otherwise, it appears without the markers at all as in verb serialization. Since the verb serialization is dealt with in 2.7, this section reviews the former.

2.6.1. Adverbial Clause

In general, an adverbial clause in Maybrat describes the temporal, locational, or manner aspect of the main clause. The adverbial and relative clauses are similar in their

forms and functions in most cases (Dol 2007:234). For example, in the following sentences, the relative clauses indicate the time the events in the main clauses take place.

(67) *um ro m-se po re-t-o / rae m-ama ø-srar.*
moment REL 3U-put cloth Loc.Spec-near-U man 3U-come ø-dance
'The moment that (they) put the (traditional) cloth, the people come and dance.'

(68) *ari ro n-kias n-ama t-o / tuo t-awe.*
day REL 2S-tell 2S-come near-U 1S 1S-fall.
'The day that you told [me] that you came, I fell (got an accident).'

Adverbial clauses that describe location and manner are headed by either the locative adverbial *wo-re* or the manner form *fi-re,* equivalent to 'at' and 'similar.to-PART,' respectively.

(69) *fi-t-o / n-tien wo-re anu n-tien ø-sia n-me a*
similar.to-near-U 2S-sleep Loc-far 2P 2-sleep ø-with 2-mother INT
'Like that, you sleep where you sleep with your mother?'

(70) *fnia m-ape m-nan fi-re nuo n-ape*
woman 3U-give.birth 3U-enough similar.to-PART 2S 2S-give.birth
Feri ana fi-f-o
Feri 3P similar.to-very.near-U
'Women give birth like you gave birth to Feri and others like this.'
(NRT: ET-5/21/2021)

2.6.2. Coordinate Clause

Three forms usually mark coordinate clauses in Maybrat: *mati*, *na*, *mnan*. The three forms basically indicate a sequence of or coordinated events. The forms *mati* and *na*

may be equivalent to 'and then,' whereas *mnan* functions as a coordinating marker with the same meaning.

(71) *Tuo t-wa t-awe t-hoh ø-srot mati t-amo t-aut ara.*
1S 1S-not.know 1S-say 1S-run ø-fast and.then 1S-go 1S-climb tree
'I realized that I could not run fast then I climb tree.'

(72) *ana m-o taa t-o ø-sepi na m-hah* ***baru*** *m-ake.*
3P 3U-take rope near-U ø-cut and.then 3U-tear **and.then** 3U-tie
'They take that rope, cut it, and then tear it [into half] and tie [it].'
(NRT: MW-5/21/2021)

(73) *ana m-o muniah m-se y-asoh m-nan m-o intape m-kiar*
3P 3U-take rifle 3U-put 3M-mouth 3U-then 3U-take rope 3U-tie.up
'They took weapon, (they) put (it) in his mouth then (they) took rope and tied (his wrist) up. (NRT: RT-4/21/2021)

In other contexts, the coordinating marker *mati* functions similarly to the purposive clause markers *mi* and *re* (i.e., so that). Given that, the clauses may fall into subordinate clauses rather than coordinate ones.

(74) *p-mo tuoh ro-n-o mati krau m-siar.*
3P-go place Loc.Spec-far-U and.then bandicoot 3U-many
'Let's go to that place there so there are many bandicoots.'

(75) *ana ø-hafri mi m-o po-m-auf ø-waro m-e p-tus.*
3P ø-feel.for so.that 3U-take NOM-3U-content ø-little 3U-give 3P-add.up
'They feel for [us] so they give some money, and we add [it to the total amount]
(NRT: RT-5/16/2021)

2.6.3. Conditional Clause

Conditional clauses are found in the contexts where mental verbs like *m-he* '3U-see', *t-har* '1S-know', *t-ari* '1S-hear' are used. They can appear together with the manner adverbial *fi-re* 'similar.to-PART' as in (78). Together, they form clauses that are comparable to *if*-clauses in English.

(76) *n-he ø-skoh fi-t-o / n-tu m-ama p-it aof.*
2S-see ø-like similar.to-near-U 2S-call 3U-come 1P-eat sago
' See if she likes it, call her to come and we eat sago.'

(77) *fi-re t-har ait y-ama t-o / tuo ø-kro*
similar.to-PART 1S-know 3M 3M-come near-U 1S ø-follow
t-atat p-mo tauf.
1S-grand.father 1P-go forest.
'If I knew he came, I would accompany my grandfather to the forest.'

(78) *n-he fi-re rae m-siar fi-t-o / n-awe tuo.*
2S-see similar.to-PART man 3U-many similar.to-near-U 2S-say 1S
'(If) you see like there are many people, tell me.'

2.6.4. Negation

To negate a proposition, Maybrat speakers use two forms: *fe* and *m-fe*, which may function in a similar way in many contexts (Dol 2007:167). Syntactically, the two forms appear post-verbally. *m-fe* also appears clause-initially and can function without a grammatical subject (80). In fact, the person inflection here has nothing to do with agreement and it reflects the function of the comitative verb *m-ae*.

(79) *fnia ro ø-hifioh fe t-o n-men fe.*

Woman REL ø-diligent Neg near-U 2S-marry Neg

'[A] woman who is not diligent, do not marry [her].'

(NRT: RT-5/16/2021)

(80) *m-fe fi-t-o orie rae m-e hamamos.*

3U-Neg similar.to-near-U later man 3U-give offering

'[If] nothing happens, later people give offerings.'

(NRT: MW-5/21/2021)

2.7. Serial Verb Constructions

While some clauses are marked overtly for coordination and subordination, clauses in Maybrat are typically composed of serial verb constructions (SVCs). Aikhenvald (2006:10-14) notes two common features of an SVC: it expresses a single event and shares an argument.

Dol (2007) notes that SVCs in Maybrat are mainly characterized by intonation contours that are markers for either coordination or subordination functions. For coordination SVCs, two conditions should be met. First, the constructions have a single intonation contour (no pause break when uttered). Second, the marker *mati* can be inserted without changing the function and meaning of the constructions. These kinds of SVCs are frequent with motion verbs (82-83), causative verbs (84), or directional verbs (85).

(81) *rae m-amo m-atu awiah ninan.*

man 3U-go 3U-dig.out taro at.random

'People dig out taro recklessly.'

(82) *t-roh t-amo Sorong t-sia ku-kek ro ø-farkor.*

1S-go.down 1S-go Sorong 1S-with child-red REL ø-school

'I go to Sorong with the school children.'

(83) *ara ro t-fat m-tie m-amo m-ai amah rae.*

tree REL 1S-cut.down 3U-break 3U-go 3U-hit house man

'The tree that I cut down broke and hit people's houses.'

(84) *ana m-o muniah m-se y-asoh.*

3P 3U-take rifle 3U-put 3M-mouth

'They take rifle and put (it) in his mouth.'

It should be noted that although the marker *mati* can be inserted in the constructions, it may be applied to (85) but may not to the rest of the examples. This may be attributed to the types of the serial verbs: *contiguous* and *noncontiguous* (Aikhenvald 2006:37) (See Chapter 3 for details). The coordination SVCs in Maybrat can be more complex with a range of verbs as discussed in 2.6.

For subordination SVCs, they typically involve constructions that have either the mental verbs (e.g., *ø-skoh* 'like'), the perception verbs (e.g., *m-ari* 'hear'), or the telling verbs (e.g., *ø-sokuos* 'ø-tell'). An SVC with these verbs usually functions as a complementation structure.

(85) *nuo ø-skoh n-som* ***bola*** *fi-t-o n-ama p-som.*

2S ø-like 2S-play ball similar.to-near-U 2S-come 1P-play

'(If) you like playing soccer, come and let's play.'

(86) *t-not t-awe t-amo iso Kokas.*

1S-think 1S-say 1S-go road Kokas

'(I) thought (I would) take (the) road (to) Kokas.'

(87) *rae m-kias m-awe p-no po iwai r-au.*

man 3U-tell 3U-say 1P-do thing formerly POSS-3U

'People told (us) that we do thing (we) did before.'

2.8. Definiteness

It has been described that many NPs in Maybrat are inherently encoded with unspecified or indefinite referents (i.e., bare NPs). The speakers frequently use the demonstrative forms to define nouns. In this case, they may use the short forms of the demonstratives *f-o* 'very.near-U' and *t-o* 'near-U' (Dol 2007:175) to indicate that something has already been mentioned. Relativization is another way of expressing definiteness in Maybrat. All these forms are commonly used in a longer or continuous speech. Examples (88-84) illustrate the functions of the two forms.

(88) *po ro n-ait f-o / po-it p-awia nuo ø-skoh*

thing REL 2S-eat very.near-U thing-eat thing-who 2S ø-like

'Things that you eat here, what foods do you like?'

(NRT ET-5/18/2021)

(89) *m-ama t-o / m-he Yepoh ait y-kah ora r-ait*

3U-come near-U 3U-see Yepoh 3M 3M-burn garden POSS-3M

'The moment that they came, [they] saw this Yepoh was working in his garden.

(NRT: RT-4/21/2021)

Sentence (89) is an excerpt of a conversation about a favorite food that ET has explained before for his partner. In (90), the speaker refers to the whole event previously mentioned in the story, that is the people who were on their way to arrest Yepoh.

In addition to the use of the demonstratives, the speakers may insert a pronoun after a full-fledged NP to indicate that the entity they are talking about is what they have mentioned previously.

(90) *fai* ***au*** *m-amo m-hu akus ku kiniah.*

Woman 3U 3U-go 3U-stay left.behind child small

'The woman went and left her small child behind.'

(91) *rae* ***ana*** *te-au m-hu wao.*

man 3P area.N-U.Dist 3U-stay in.place

'The people there stay in place.'

(NRT: LT – 5/18/2021)

2.9. Topic Construction

There are two ways a topic is constructed in Maybrat. First, an object NP is fronted or left-dislocated from an object position to the left periphery of a sentence as in (93). Relativization is another way of topic construction as shown in (94). According to Dol (2007:148), the fronting of an object, in particular, marks the switch from one topic to another topic.

(92) *ø-safa fane re-f-o / hariah orie m-po Ø m-amo tetara.*

ø-slice pig Loc.Spec-very.near part later 3U-take 3U-go separate

'[They] slice the pig (in big chunks). Some parts, later [they] bring to the respective places.'

(93) *men ro-nuo n-men t-o / men t-ama t-eyu Ø.*

Tomorrow POSS-2S 2S-marry near-U tomorrow 1S-come 1S-pay

'Later, yours that you are marrying, I will come and pay [her dowry].

(NRT: RT 5/16/2021)

Second, a topic can be the subject of a previous sentence that is reintroduced to the following sentences in view of Givón's (1983:8) *topic continuity*. This kind of topic construction occurs when there is a long pause between the previous and the following sentences.

(94) *ku ø- tna r-amu re-f-o m-arak /*

Child ø-recently POSS-1P Loc.Spec-very.near 3U-dissapear

ana m-amo ø-kreyan ø-sia ø-farkor m-ae pohra m-ase //

3P 3U-go ø-work ø-with ø-school 3U-at premises 3U-big

***Ana f-o** / m-hu uwa m-ae Yogya.*

3P very.near-U 3U-stay together 3U-at Yogya

'Our newcomer children are not here. They go to work and study in big cities. These kids, they live together in Yogya.'

(ECT: ET – 11/20/2020)

CHAPTER 3

ON NULL ARGUMENTS

3.1. Introduction

Since Chomsky (1982) introduced *pro* as one of the empty categories, different theories have been proposed to explain the derivation of null arguments among pro-drop languages. Among the theories, rich agreement has been used as a benchmark to parametrize pro-drop languages (e.g., Chomsky 1981; Jaeggli and Safir 1989). Under GB theory, pro-drop was seen to be triggered by Agr head in which *pro* is an empty category whose content (i.e., ϕ-features) is valued by Agr. Since the introduction of the Minimalist Program (MP) in the early 1990s, there has been a shift in the specification of a lexical item. MP postulates that lexical items entering a derivation have formal features that are either interpretable or uninterpretable (Chomsky 1995). For example, the functional head T is considered uninterpretable in ϕ-features whereas *pro* is uninterpretable. Thus, it is *pro* that values the uninterpretable features of T. This shift has motivated several theories on the derivation of null arguments in the spirit of MP, which is one of the main discussions of this chapter.

This chapter is organized as follows. It starts out by defining null arguments in relation to argument structure and theta projection in Section 3.2, followed by 3.3 which elaborates the nature of null arguments. The section touches on the properties and the types of null arguments as well as the conditions for their appearance. 3.4. reviews pro-drop theories under GB theory. 3.5. focuses on theories of the derivation of null arguments in MP. It focuses on some previous accounts on the derivation of *pro* under *Agree* framework (i.e., Holmberg 2005; Miyagawa 2010; Sigurðsson 2011; Frascarelli

2007). 3.6 discusses the current typology of pro-drop languages under MP proposed by Biberauer et.al. (2010). 3.7 stresses on the notion of topic and its relation to pro-drop. Finally, 3.8 reviews a few proposals on the derivation of pro-drop in Serial Verb Constructions (SVCs).

3.2. Argument Structure and θ-roles

Before turning to the notion of null arguments, it is necessary to define an argument and its relation to a verb or predicate. Argument is a crucial component of a verbal clause since it completes the meaning of a proposition conveyed by the clause (Riemer 2010). Kroeger (2005) notes that a verb or predicate has a semantic role that denotes the property or relationship of a noun. Thus, arguments are individuals that satisfy the property or relationship. An argument is the participant or agent/doer of an event encoded in a verb (Chomsky 1981). In the sentence *John saw the movie*, *John* and *the movie* are the arguments which the verb needs to display the relationship between the agent of seeing and the object of the seeing. Closely related to argument is grammatical relation. When it appears syntactically, an argument bears a structural position as the subject, object, or indirect object of a sentence. Arguments can then be distinguished from other elements such as adjuncts (e.g., adverbials) which are also important to the meaning of a clause but have a secondary relationship with verbs (Kroeger 2005).

The relationship between an argument and a verb is specified by argument structure. It involves the assignment of θ-roles to a noun by a verb. In fact, θ-roles change in accordance with which types of verbs are used (Kroeger 2005). In other words, as van Gelderen (2017) puts, a verb type is determined by the number of arguments it can

take. As shown in (1a), the verb *give* assigns three different θ-roles (agent, theme, goal/recipient) which is different from the intransitive verb *swim* which assigns one role (agent).

(1) a. *Daniel* gave *a flower* to *Sally*

b. *I* swim every day

Although thematic roles may change depending on the types of verbs, *theta-criterion* constrains the number and types of roles each argument should have (Chomsky 1981:36).

(2) θ-criterion

each argument bears one and only one *θ*-role,

and each *θ*-role is assigned to one and only one argument.

Strictly speaking, *Daniel* in (1a) cannot be both the giver and the recipient of the flower even if Sally is augmented to be the direct argument of the verb e.g., *Daniel gave Sally a flower*. This may suggest that θ-roles determine the structural position of an argument.

In GB theory, the object of a clause is the internal argument whereas the subject is the external argument. Hornstein, Nunes, and Grohmann (2005) note that the θ-role of an internal argument is determined by a verb, but the external argument and its role may be determined by the entire VP clause (verb and object argument). The authors illustrate it with examples like *She took the book,* and *She took a rest* (p.77). If it is assumed that verbs like *take* assigns two θ-roles, then the phrase *a rest* in the second sentence should be considered the object with a thematic role (i.e., theme). In fact, it is not how it is perceived. The subject of the second sentence may be the agent or experiencer of taking a

rest. Building on Chomsky (1981), Hornstein, Nunes, and Grohmann (2005) suggest that it is necessary to put not only the verb but the whole VP into the framework of θ-role assignment. In that sense, the whole VP, *took a rest*, defines the role of the agent.

3.3. Defining Null Arguments

The term null argument may imply that a verb does not have an argument which seems to be contrary to the argument structure defined above. Bearing in mind the θ-criterion, every θ-role should have a θ-position at LF (Chomsky 1981). It can be assumed that an argument (NPs or pronominal) should fill a θ-position. In other words, a verbal clause like (3) may appear without a subject on the surface, but it has an underlying subject argument with a thematic role. Otherwise, the clause is meaningless. So, the fact that an argument is not realized is a matter of phonological realization which is subject to variation. It may explain the fact that some languages can still indicate the presence of argument through morphological markers like (3) in Spanish and (5) in Marathi whereas others like (4) in Chinese cannot and should resort to non-morphological properties.

(3) salimos [Spanish]
Left (Camacho 2013:14, ex. 2a)
'we left'

(4) ___ kanjian ta le. [Chinese]
see him PERF (Liu 2014:19, ex. 32a)
'[He/She] saw him.'

(5) Ram mhanala ki ghar ghetla [Marathi]
Ram say-PST-3SM that house buy-PST-3SN
'Ram said that he bought a house.'
(Holmberg, Nayudu, & Sheehan 2009:60, ex. 1b)

The growing interest in the study of null arguments goes back to Perlmutter (1971) who initially identified that some European languages allow null subjects (e.g., Italian, Spanish, Portuguese) while others (e.g., French and English) do not. Chomsky (1981; 1982) took it further and introduced *pro*-drop as a cover term for null subjects. Since then, studies on pro-drop have shown that the appearance of null subjects varies. They can appear in simplex clauses as in (3) and (4) or in embedded clauses as in (5). The current pro-drop theories have noted that while some languages like Italian, Spanish, Chinese or Korean can freely drop null subjects in many contexts some others like Finnish, Marathi, and Brazilian Portuguese have certain restrictions.

It has also been found that many pro-drop languages drop objects of a finite clause, but not as massive as the discourse pro-drop languages like Chinese, Japanese, or Korean. Consider the following sentences in Korean in comparison with Imbabura.

(6) a. *Nwuku-ka Mary-lul poassni?* [Korean]

Who-Nom Mary-Acc saw

'Who saw Mary?'

b. *John-i pro poassta* (Kim 1992:30)

John-Nom saw

'John pro saw.'

(7) *Juan$_i$ munan Juzi Ø$_i$ rijsichun*. [Imbabura]

Juan wants Jose know

'Juan$_i$ wants Jose to know him$_i$.' (Cole 1987:600, ex.8)

In (6), objects can be dropped as long as discourse context is rich enough to recover the content of the object (Huang 1984; Tomioka 2003; Neeleman & Szendrői

2007). (6b) is acceptable as long as it is linked to the previous discourse (6a). In contrast, sentence (7) in Imbabura is grammatical if it is coreferential with the NP of the higher clause (Cole 1987). Both examples may suggest that the previous context promotes pro-drop. As this chapter proceeds, it appears that it varies among *pro*-drop languages.

This section has shown that null argument refers to the absence of an argument in the structural subject/object position of a sentence. Although it is absent phonologically, the structural elements are present syntactically which is subject to subcategorization or θ-projection.

3.3.1. Types of Null Arguments

3.3.1.1. Null Subject

Rizzi (1986), following Chomsky (1982), has classified null subject pronouns into three types: referential pro, quasi-referential pro, and expletive pro. The three types of null subjects can be distinguished by the degree of referentiality.

To begin with, a pronoun typically has a referent that is present in an immediate higher clause or a previous sentence (Kroeger 2005). Bhat (2004) suggests that although all pronouns can be referential, there should be a distinction between the 1st and 2nd person pronouns, and the third ones. 1st and 2nd person pronouns are associated with speech participants whereas the 3rd person forms are non-participants (Bhat 2004; Frascarelli 2007; Givón 1983). While the former types are inherently definite, the latter may not (Siewierska 2004; Bhat 2004; Lyons 1999) have to be defined by NPs of the previous sentences or by a discourse context.

In the same sense, when these pronouns are null, they should be bound by the presence of other elements either by pronominal markers or NPs or topics mentioned previously. Take (8) in Chinese (from Samek-Lodovici 1996:33), in addition to (5) in Marathi, where *pro* is coreferential with the NP mentioned in the previous sentence.

(8) *Zuotia, Lisi$_i$ dapo le yizhi beizi. Jintian Ø$_i$/tai dapo le linwai yizhi.*
Yesterday Lisi break ASP one cup Today Ø$_i$/he$_i$ break ASP another one
Yesterday, Lisi broke a cup. Today he broke another one.

Null referential subjects may also involve generic pronouns. According to Lyons (1999:179), a generic NP "expresses generalizations about a class as a whole." It does not specify a single kind from a set of referents. Holmberg & Sheehan (2010) note that some languages normally drop this kind of pronouns. Perhaps they are more accurately defined as impersonal or arbitrary pronouns, equivalent to the pronouns *one* or *they* in English in their indefinite uses. The authors specify that the former is inclusive (including the speaker and addressee) whereas the latter exclusive (excluding the speaker and addressee). Consider the following example from Marathi, a language that normally drops generic pronouns (from Holmberg, Nayudu, Sheehan, 2009:60, ex. 1a).

(9) *Unahlyat lavkar utthavla jato*
summer-in early wake go-PRS-3SM
'In summer one wakes up early.'

In contrast, some pro-drop languages do not drop referential, but non-referential pronouns. Contrary to null referential pronouns, this kind of null pronoun makes no specific referents or antecedents. It may include the expletive forms like *it* and the existential *there* in English which is observed in languages like German (from

Cardinaletti 1990, cited in Roberts & Holmberg 2010:8) and Icelandic (from Biberauer 2010:158, ex.6a) as in (10) and (11) respectively for their null forms.

(10) *Gestern wurde (*es) getanzt.*

Yesterday was (it) danced

'Yesterday there was dancing.'

(11) *I gaer rigndi (*það)*

Yesterday rained it

'Yesterday it rained.'

The expletive null pronouns can also be referred to as non-thematic pronouns because they may be perceived as having no semantic roles. The null expletives in (10) and (11) cannot be the agents for the predicate. They are just filling the subject positions to satisfy the EPP requirement (i.e., a subject position has to be filled by a syntactic element). In fact, the expletive *it* may be considered referential as it shows the number feature when it is used in another context. For this reason, some authors refer to it not as a pure expletive as in (10), but a quasi-expletive form (Ackema et.al.2006; Biberauer 2010; Y. Huang 1995; Rizzi 1986). Icelandic, Finnish and Hebrew are also among the languages that normally drop the quasi-expletive pronoun.

3.3.1.2. Null Object

In contrast to the typology of null subjects, a null object may be classified as either a variable or a pronoun. As Huang (1984) observes, null subjects that appear in the subject position of a simplex or main clause of non-agreement languages like Chinese, would potentially be variables because they are bound by discourse contexts/topics. As

for null objects, since many pro-drop languages that have been studied lack verb-object agreement (e.g., Chinese, Japanese, Korean), it can be assumed that the appearance of null objects in these languages can be interpreted in the same way.

The term variable was initially defined by Chomsky (1981) as an empty category in GB theory. An element 'α is a variable if and only if it is locally A'-bound and in an A-position' (Chomsky 1981:330). By this definition, a variable is a trace left by a movement of an NP from a base-generated A-position (argument position) to a non-argument position (A'-position). The moved object becomes an operator that controls or binds the variable.

The larger part of the efforts to define the variable status of a null subject or null object may have been due to Huang (1984). Huang argued that null objects in many East Asian languages have to be interpreted as variables because they are bound to topic operators. Liu (2014:34) describes Huang's view in the following representations with the null topic in (12a) and overt topic in (12b).

(12) a. [$_{TOP}$ e_i] *Zhangsan$_i$ shuo* [*Lisi bu renshi* e_i]].

Zhangsan say Lisi not know

'Zhangsan said that Lisi did not know [him].'

b. [$_{TOP}$ *neige reni$_i$], Zhangsan shuo [Lisi bu renshi* e_i].

that man Zhangsan say Lisi not know

'That man$_i$, Zhangsan said Lisi did not know him$_i$.'

According to Huang (1984), the topic operator as in (12a) is the result of a movement, reflecting a *Wh*-movement. Once moved, the NP gets deleted and becomes the null operator in A'-position which is not observed in (12b). Huang's proposal has

received support from some authors for the appearance of null objects in Spanish (Campos 1986), European Portuguese (Raposo 1986), and Kinande (Authier 1988). Later, I will show that topicalization may not be considered purely as involving the operator-variable relation. In some contexts, topic formation may not involve movement and the empty object/subject positions can also be filled by resumptive pronouns (i.e., based-generated *pro*).

Furthermore, some authors have argued that the null object of an embedded clause can be assumed as a pronoun (Cole 1987; Chung 1984; Kim 1992; Phimsawat 2011). These authors found that null objects that appear in Imbabura, Chamorro, Korean, and Thai respectively have pronominal interpretation. These authors provide two kinds of evidence for this kind of null object. First, building on Principle B of the binding theory, the null objects can take a matrix NP as the antecedents as shown in (13) for Imbabura (Cole 1987:600) and in (14) for Korean (Kim 1992:36).

(13) *Juzi$_i$ nin Marya Ø$_i$ juyanata*.

Jose says Maria will love

'Jose$_i$ says that Maria will love [him$_i$].'

(14) John$_i$-i [Mary-ka Ø$_{i/j}$ ttayry-ess-ta ko] malha-ess-ta.

Nom Nom hit-past-decl Comp say-past-decl

'John$_i$ said that Mary hit him$_i$ or someone$_j$.'

Second, a null object pronoun can appear in an island construction. This means the object may not be extracted from an island structure such as an extended relative clause or a complex NP clause. Based on some previous data, Cole demonstrates that it is illicit in Portuguese or Spanish, but not in Imbabura Quechua, to leave an object

unpronounced in this structure. This is shown in (15) for Portuguese and (16) for Imbabura Quechua (Cole 1987:600, 602).

(15) **Eu informei a policia da possibilidade de o Manel ter*

I said the police of the possibility of the manel had

guardado Ø no cofre da sala de jantar.

kept it in the safe of the dining room

'I informed the police of the possibility that Manel had kept Ø in the dining room safe.'

(16) *Juan$_i$ yuyan [chay [Ø$_j$ pay-ta$_i$ / Ø$_i$ rijsishka] runa] mirkadu-pi kashka-ta.*

Juan thinks that he-acc knew man-acc market-in was-acc

'Juan$_i$ thinks that the (man)$_j$ who knows (him)$_i$ was in the market.'

As seen from (15) Portuguese does not allow the object to be unexpressed in the complex complement clause. In contrast, the null object is allowed to appear in the same structure in Imbabura (16). Cole (1987) notes that since null objects in Imbabura can appear independently in an island construction, it is considered a pronoun. I will explore more on the nature of a variable and a pronoun, and topicality in Section 3.7. Suffice it to say, the object *pro* in this context is base-generated within the island structure.

3.3.2. Licensing and Identification Conditions

Another important aspect in dealing with the appearance of null arguments is the licensing and identification conditions. Building on Rizzi (1986), licensing deals with the formal conditions that license the structural positions of null arguments. Identification deals with the conditions that identify the content of null arguments. As far as pro-drop

theories are concerned, the licensing and identification conditions of null arguments fall into morphosyntactic conditions and discourse-related conditions. In the remainder of this sub-section, I discuss another condition that has been proposed by some recent authors which can be situated in between the two conditions.

3.3.2.1. Morphosyntactic Conditions

One major morphosyntactic condition cited in pro-drop literature is that proposed by Taraldsen (1980), commonly regarded as Rich Agreement Hypothesis (RAH). According to Taraldsen, null subjects that are observed in some European languages (e.g., Italian or Spanish) are subject to Agr head binding. These languages have a rich agreement paradigm, compared to languages like English or France that are poor in the paradigm. Because of the rich paradigm, null subjects are allowed in these languages. This view received support from some early generative scholars with certain reformulations (Chomsky 1981; Rizzi 1986; Jaeggli & Safir 1989; Borer 1989). Some authors (e.g., Alexiadou & Anagnostopoulou 1998; Platzack 2003; Manzini & Savoia 2002; Borer 1986) even have suggested that a verbal agreement head (morpheme) in these languages can function as a pronominal (subject). As such, a verb can act as a grammatical clause as shown in (17) for Italian and in (18) for Spanish.

(17) *cred-e* 's/he believes'

(18) *habl-a* 's/he speak'

One concern that has been circulating among the scholars in relation to Agr head is whether the subject is ever present structurally. Rizzi (1986) argues that null subjects are present structurally by the so-called INFL licensing/identification conditions. The

author suggests that null subjects appear in their structural positions, and it is licensed by INFL head that governs their Case positions. The INFL head also has the same index as *pro* in terms of ϕ-features (person, number, gender) that enable its identification.

Rizzi (1986) proposal has been influential in explaining the appearance of null subjects in pro-drop languages. However, it may only be applicable to languages that have verbal agreement morphology. This is notably argued by Huang (1984) who observed that many East Asian languages (e.g., Chinese, Japanese, Korean) do not have agreement morphology at all but drop subjects and objects freely. Huang suggests that the appearance of null arguments in these languages cannot be licensed and identified by morphological agreement, but discourse contexts.

3.3.2.2. Discourse-related Conditions

The appearance of null arguments that are conditioned by discourse-related features may be more apparent in non-agreement languages than agreement languages. According to Huang (1984; 1991) the fact that languages like Chinese, Japanese, or Korean drop subjects or objects freely should be explained by rich discourse context. These languages can drop the arguments once a topic is mentioned or established in the previous discourse. It can be said that the null subjects (including null objects) are the topics themselves in view of Li & Thompson's (1976) framework of subject in topic-prominent languages.

Huang (1984:533, ex.7bc) illustrates it in the following examples in addition to (12). The null subject in (19a) and the null object in (19b), can appear if they take Lisi in

the previous discourse as the topic referent. It can be assumed that both null arguments are representations of the discourse topic.

(19) Speaker A: *Zhangsan kanjian Lisi le ma?*
Zhangsan see Lisi LE Q
'Did Zhangsan see Lisi?'

Speaker B:

a. *Ø kanjian ta le*
'[He] saw him.'

b. *ta kanjian Ø le*
'He saw [him].'

So far, discourse topic seems to be the identification condition, but not the licensing condition for the absence of Agr head in languages like Chinese. Given this fact, Aoun & Li (2008) suggest that the structural position of the null argument in non-agreement languages should follow the θ-projection. In other words, the structural position of a null subject or object is determined by theta-structure which is projected at D-structure (Chomsky 1981; 1995 Ch. 1; Hornstein, Nunes, and Grohmann 2005). Assuming VP-Internal Subject Hypothesis, a subject is the external argument of a VP and an object is the internal argument (van Gelderen 2017; Hornstein, Nunes, and Grohmann 2005). It then confirms the underlying argument structure of a clause as proposed by Chomsky (1981).

3.3.2.3. Contextual/Antecedent Conditions

Some recent scholars have taken a different look at how context may function as both sentential and discourse antecedents. They propose that agreement alone may not be sufficient to license the appearance of null arguments even in agreement-based languages

(e.g., Frascarelli 2007; Samek-Lodovici 1996; Cole 2009; Camacho 2013; Sigurðsson 2011). These authors suggest that an NP that has been promoted as a topic or mentioned in a previous sentence licenses the appearance of a null argument. In other words, there is an anaphoric relation where a previously mentioned NP identifies the content of a null argument of the following clauses.

Samek-Lodovici (1996) considers topic promotion triggers pro-drop even in rich agreement languages. Based on the analysis of the null subjects in Italian, Greek, Chinese, and Hebrew, the author shows that sentences like (20b) are grammatically linked to the NP (Gianni) once it is promoted to a topic position (subject position). When the NP is not in a topic position as in (20a), the null subject is ruled out.

(20) *a.* *Questa mattina, la mostra é stata visitata di Gianni$_i$. Piú tardi, *e$_i$/egli$_i$/lui$_i$ ha*

This morning the exhibition was visited by John. More late, (he)/he/he has

visitato l'universitatá.

visited the university.

'This morning the exhibition was visited by John. Later on, he visited the university.

b. *Questa mattina, Gianni$_i$ ha visitator la mostra. Piú tardi, e$_i$/?egli$_i$/??lui$_i$ ha*

This morning, John has visited the exhibition. More late, (he)/he/he has

visitato l'universitatá.

visited the university.

This morning, John visited the exhibition. Later on, he visited the university.

(From Samek-Lodovici 1996:31-32)

In the same spirit, Cole (2009) shows that contextual antecedent plays a major role in the recovery of null subjects. Based on the author's analysis of a number of unrelated languages, the author found that null subjects that appear in both agreement and

non-agreement languages are conditioned more by context than the morphosyntactic features (e.g., agreement). Cole shows that languages like Bengali only have agreement in person whereas Spanish or Serbian have syncretic person features (e.g., 1st and 3rd forms). Such asymmetry self-evidently promotes the use of overt pronouns. In fact, null subjects remain without rendering the sentences ungrammatical as shown by Cole (2009) in the following example in Spanish (p.563). The example shows indeterminacy in agreement which can only be tackled by contextual antecedent.

(21) *Juan llegaba a casa. Ø Tenia las llaves.*

John arrive-1/3S.IMPERF to home. (he) have-1/3S/IMPERF the keys

Based on sentences like (21) and other instances of agreement asymmetry in other languages, Cole suggests that null subjects in such contexts have to be managed by the presence of an antecedent or context. In fact, the extent to which context (discourse/sentential context) is not specified clearly in Cole's study. Cole seems to integrate NPs in A'-topic, A-topic, and matrix clauses into a context-related condition for pro-drop. The author suggests, however, that the contextual condition has to be viewed in a continuum of *morphological maximality* (p.577). It assumes that null subjects may appear where context is rich enough to recover them. If not, agreement features should be uniquely encoded (either with all or a single ϕ-features) in the verbs to specify their contents. This may put the nature of rich agreement and pro-drop into question.

Thus far, the conditions for the appearance of null arguments are driven by morphosyntactic and discourse features, and contextual/topic antecedents. Assuming Cole's (2009) contextual antecedent is correct, discourse topic and syntactic binding can

be subsumed under context-bound null arguments which distinguish them from the morphological condition (agreement). However, a problem may arise if the former condition is considered. It can be assumed that all instances of null arguments can be variables or pronouns, depending on how a context is perceived. If the subject of a previous sentence is considered a topic, it may be perceived as either A-topic or even A'-topic once introduced as a null topic which is dealt with exclusively in Section 3.7. In addition, a matrix NP that is coindexed with a null subject in an embedded clause should be understood as a topic antecedent as well.

However, I assume with Cole (2009) that the licensing/identification conditions for the appearance of null arguments have to be viewed in a continuum between non-agreement and agreement-based conditions. Instead of putting languages into the binary (agreement vs non-agreement), languages may vary in agreement inflection and are situated along the spectrum between non-agreement to full agreement morphology. What follows is that the interpretation of a null argument may be placed along the continuum between a variable and a pronoun. In Chapter 4 and 5, I show that Maybrat may fit into these continuums as it has two types of clauses with different morphological forms (i.e., the inflected and uninflected verbs).

3.4. Null Arguments in GB Framework

Under GB theory, null arguments are viewed as empty categories in argument positions whose references are valued by other NPs (Chomsky 1981; 1982). This has at least been motivated by three major principles of GB: Move α rule, Projection Principles (PP), and Binding Theory.

3.4.1. Move α

First of all, it is important to review the levels of representations in GB theory because of their relevance to empty arguments and as this section proceeds to the Minimalist Program in the following sections. According to GB theory, a linguistic expression is represented in four levels: D-structure (DS), S-structure (SS), and LF (semantic representation) or PF (phonological representation) structures. D-structure constructs the phrase structure in which θ-positions are projected at least in a VP. DS is thus the foundation of the derivation of a clause. S-level is the intermediate level which serves to mediate DS level (lexical structure) and how it is interpreted or expressed at LF or PF representation. The latter, however, has been assumed to be subject to parametrization (Chomsky 1981).

Turning to Move α (α = syntactic object), it is the operation that is responsible for building the structure upon which DS is established. A lexical item is understood in GB as having both formal and categorical features which necessitate it to be computed throughout a derivation. Based on these features, Move α builds up the S-structure by moving the lexical items in accordance with the formal properties. For example, an NP that starts out as an external argument may end up as the subject in the maximal projection of a sentence to satisfy the EPP requirement. The movement leaves a trace which retains the properties (e.g., θ-role) established at the DS level.

Chomsky (1981:56) gives three properties of Move α. First, any movement triggered by this rule would end up in a non θ-position. This is seen in the raising verb construction or object extraposition that forms a passive structure. Second, Move α is

subject to Subjacency condition according to which a movement takes place within a governing (local) domain. Given that, the traces should properly be governed by heads. This has become the third property of Move α rule.

3.4.2. Projection Principles

Relevant to Move α is the Projection Principle (PP). The principle suggests that all information related to lexical items and their projection has to be maintained throughout all levels of representation (DS SS, and LF or PF). As such, a moved syntactic object and a trace is comparable to retaining the lexical information, except for the former that is pronounced. Some problems may arise with this principle. One of which is the presence of the existential *there* in the subject positions of English sentences which is not the result of a movement. It does not retain any information that is relevant to the base-structure (DS). To accommodate the presence of such an expletive in the subject position, Chomsky (1982) proposed Extended Projection Principle (EPP) which basically requires a grammatical element to fill the subject position of a sentence, regardless of their relation to DS features.

3.4.3. Binding Theory and Empty Categories

In Chomsky (1981), empty categories include NP-traces, PRO, and variable, which was extended to include *pro* in Chomsky (1982). These traces, since they are, by and large, the product of movement, should have referential relations with the moved elements. In other words, the empty categories need to have antecedents that bind their interpretations. The relations are formulated under the following Binding Principles (Chomsky 1981:188).

(22) Binding Theory

Principle A: *An anaphor is bound within a local governing domain.*

Principle B: *A pronominal is free from a local governing domain.*

Principle C: *An R-expression is free (including variable and name).*

3.4.3.1. NP-trace

NP-trace has been defined as resulting from NP-movement in structures like passive and raising constructions. For example, in the passive construction (23), once an NP from the object position is moved, it leaves a trace which is coindexed with the moved object. This also holds for the raising construction in (24) where Mary is raised to the higher Spec-TP position and leaves a trace. The movement is particularly triggered by the inability of the non-finite verbal head (T) to assign Case to Mary.

(23) The deer$_i$ was shot t_i .

(24) [Mary seemed [t_i to kiss John]]

(Hornstein, Nunes, and Grohmann:2005:52)

According to Jaeggli & Safir (1989:14), although NP-traces are similar to *Wh*-traces in terms of movement, they are different in two respects. First, no Case may be assigned by the verb head to an NP trace with respect to passive construction, compared to a *Wh*-trace. Second, NP-trace may be governed if it is construed as the object of a passive verb. If it has an antecedent under strict binding principle, it should be an A-bound object (much like a reflexive pronoun bound by an immediate antecedent), unlike A'-bound trace as in the case of a *Wh*-trace. In short, an NP trace is an anaphor that is bound by an immediate antecedent that obeys Principle A of the binding theory.

3.4.3.2. PRO

PRO may simply be recognized as the subject of a non-finite clause. PRO is defined under the Binding theory as having both pronominal and anaphoric values (Chomsky 1981; 1982). That is, it should obey both Principle A and B of the binding theory. As such, it has to be free from local binding relations and take an immediate higher NP as its antecedent at the same time. With such properties, PRO appears to have a conflicting referential status. It has been suggested that to comply with having both values [+pronominal, +anaphor], PRO has to be excluded from the two binding conditions altogether (Chomsky 1981; Hornstein, Nunes, and Grohmann 2005). Consider (25) and (26) as an illustration.

(25) She wants [PRO to meet her mom].

(26) It is important [PRO to solve the problem] (Chomsky 1995:108)

Although PRO in (25) and (26) seems to be governed by the predicates under Principle A, it should be free from the binding relation as it is also subject to Principle B. Thus, a PRO has to be construed as ungoverned. If it is ungoverned, it should be Caseless since Case assignment is subject to government (Hornstein, Nunes, and Grohmann 2005).

3.4.3.3. Variable

According to Chomsky (1981:330) a variable is an empty syntactic object in A-position that is locally bound by another element in A'-position. A variable obeys Principle C of the binding theory which corresponds to R-expression. In fact, while R-expressions like names are independent from reference, variables are bound to an

antecedent (*antecedent-binding*) or an operator (*operator binding*) (Chomsky 1981:184). The former has been extended to include NP trace by means of A-binding whereas the latter is A'-bound which include names, *wh*-traces, and variables. A variable resulting from a *Wh*-movement is illustrated by the following example (from Hornstein, Nunes, and Grohmann 2005:257).

(27) [$_{TP}$ John wondered [$_{CP}$ [which picture of himself$_i$ [$_{TP}$ Fred liked [~~which picture of himself$_i$~~]]]]

As shown in (27), the full-fledged phrase in the embedded TP is a variable since it has been moved to the Spec-CP. The *Wh*-movement leaves a trace (marked by the strikethrough). Under the Wh-movement principle, the moved object in Spec-CP becomes an operator which binds the variable (trace) that is in the governing domain of the CP head.

3.4.3.4. Pro

Pro may fit into the category of pronoun and not an anaphor under Principle B of the Binding theory. The null subject shown in (13) in Imbabura is an example of *pro* since its interpretation is identified by a non-local (clause) NP. In other words, its content is identified by being referential with another NP in the higher clause. Unlike PRO which carries the pronominal-anaphoric features, *pro* lacks anaphoric features in that it should not be bound within a governing domain. According to Chomsky (1982), *pro* is similar to its overt counterpart pronoun in all the basic properties except for the phonological features.

Thus far, empty categories are defined in relation to the binding conditions which determine their referential values. This relation can be summarized as follows.

(28) a. NP trace [+ anaphor, – pronominal], *Principle A*
b. Variable [– anaphor, – pronominal], *Principle C*
c. PRO [+ anaphor, + pronominal], *Principle A & B*
d. Pro [– anaphor, + pronominal], *Principle B*

3.4.4. Rizzi (1986)

Building on the previous work on pro-drop (e.g., Taraldsen 1980; Chomsky 1981; 1982), Rizzi proposed that null subjects are syntactically licensed and identified. Rizzi formulates his proposal as follows.

(29) a. Formal licensing
pro is Case-marked by X°
b. Interpretation
Let X° be the licensing Head of an occurrence of pro: then pro has the grammatical specification of the features on X° co-indexed with it.
(Rizzi 1986:524, 520)

(29a) suggests that the functional head (i.e., verbal agreement morpheme) specifies the structural position of a subject by Case assignment. Hence, the Infl head licenses the grammatical position of a null subject. (29b) is set forth as the identification condition for null subjects according to which the Infl head has ϕ-features that are identical to the features of *pro*. So, the content of *pro* can be recovered by Agr head. Under this condition, the interpretation of *pro* has to be managed by the presence of the Infl head that carries the features.

Rizzi extends the formal licensing and identification conditions to the appearance of null objects. According to Rizzi, null objects that appear in Italian normally receive arbitrary interpretation as exemplified in (30).

(30) a. *Questa decisione rende [tutti felici].*

'This decision makes [everyone happy].'

b. *Questa decisione rende [___ felici].*

'This decision makes [___happy].' (Rizzi 1986:515)

Rizzi notes that the arbitrary interpretation is motivated by the θ-grid that is empty in the lexicon which can be filled by arbitrary features. To specify a θ-role, Arb rule (31) has to be applied either in the lexicon or in the syntax (Rizzi 1986:521). It basically suggests that while Infl head licenses the structural Case position for null objects, its content may receive ϕ-feature identification if it has. If not, the default Arb rule applies by which the arbitrary features [+human, +generic, +plural, etc] are assigned.

(31) Assign Arb to the direct θ-role

Based on Arb rule, null objects that appear in the constructions like (30b) are also a pronoun with the arbitrary features encoded in them. They are referential in terms of Principle B even though the referent cannot be specified from a class of features. According to Rizzi, arbitrary *pro* (pro_{arb}) is not established by co-referentiality but identification of a set of arbitrary features, property of both antecedent NP and *pro*.

What is proposed by Rizzi can be summarized in three respects. Null subjects or objects have structural positions that are assigned by Case. This means they are within the governing domain of heads (Agr/Infl). Second, their contents are identified when the Infl heads have the identical feature specification. Third, while a pro_{arb} is Case assigned, its identification is not bound by Infl head. A pro_{arb} has referents that are indefinite and has been assigned a default interpretation. It can be assumed that the arbitrary interpretation would be ruled out in languages that have object-verb agreement.

3.4.5. Huang (1984)

Huang raises the problem of previous null subject parameters that rely on rich agreement morphology. According to Huang, inflectional/agreement head licensing and identification of null subjects is inapplicable to non-agreement languages (e.g., Chinese, Japanese, Korean). Huang provides the following examples in Chinese in addition to the examples shown so far (from Huang 1984:537-538).

(32) a. Ø lai-le
come-LE
'[He] came.'

b. Lisi hen xihuan Ø
Lisi very like
'Lisi likes [him] very much.'

c. Zhangsan shuo [Ø bu renshi Lisi]
Zhangsan say not know Lisi
'Zhangsan$_i$ said that [he$_i$] did not know Lisi.'

d. Zhangsan$_i$ shuo [Lisi$_i$ bu renshi Ø$_j$]
Zhangsan say Lisi not know
'Zhangsan said that Lisi did not know [him].'

According to Huang, the lack of agreement in languages like Chinese may suggest that null subjects or objects are licensed by discourse topic. This is shown in clauses (32a) and (32b). These clauses do not show any agreement at all. So, they are grammatical if the null arguments are bound by discourse topics. It is different from the

null subject in sentence (32c) which is coreferential or controlled by the matrix subject. (32d) is different from (32c) in that the latter always has the null object that refers to entities outside the sentence. This suggests that the null subject in (32c), too, is bound by a discourse topic. Huang proposes that while the null subject in (32c) is a pronoun under Principle B, the rest of the instances of null arguments are variables.

According to Huang, when an NP is moved from a subject or object position and lands at A'-position, it gets deleted and becomes a null topic operator. The operator binds the trace, hence a variable. This is illustrated in (12), repeated here as (33) and (34) for convenience (from Huang 1984:542).

(33) Neige reni$_i$ Zhangsan shuo [Lisi by renshi e_i]

That man Zhangsan say Lisi not know

'That man$_i$, Zhangsan said Lisi didn't know e_i.'

(34) [Top e_i], [Zhangsan shuo [Lisi bu renshi e_i]].

Zhagnsan say Lisi not know

'*[Him$_i$], Zhangsan said that Lisi didn't know e_i.

To explain the appearance of null subjects in sentences like (32c), Huang suggests that the null subject should obey the binding principles (22). Huang (1984:552) proposes DJR and GCR principles which are the conditions for the recoverability of (pro)nouns.

(35) *a. Disjoint Reference (DJR)*
A pronoun must be free from its governing category.
b. Generalized Control Rule (GCR)
Coindex an empty pronominal with the closest nominal element.

DJR specifies that a pronoun is prevented from undergoing a local binding. Following Principle B of the binding theory, a pronominal should not be bound by an NP

within a local clause domain. As for GCR, it is actually built on control theory which posists that a null category (including PRO/pro) is to be bound by or coindexed with the closest possible antecedent which includes Agr head (for agreement languages). With respect to (32c), the null subject has to be both free from the local binding domain and controlled by the matrix subject for the absence of the closest Agr head.

3.5. Null Arguments in the Minimalist Framework

Since the Minimalist Program (MP) was introduced, certain principles that are relevant to empty categories have been either abandoned or reformulated for the sake of simplicity or economy of derivation. One of the major shifts is in terms of the levels of representation. S-structure which bridges D-structure and LF/PF representation is eliminated. This gives a direct relation between D-structure (lexical structure) and LF or PF interpretation in the derivation of a sentence. Another major shift is on the role of agreement. MP sits on the premise that interpretability of formal features is necessary for an optimal derivation of a sentence (i.e., linguistic expression). This has a greater impact on the nature of Move. Movement of a syntactic object is not as freely performed as it was under the Move α rule. Merge, instead, takes precedence over Move as the core syntactic structure building mechanism. Consequently, the notion of trace takes a new form. A trace is reformulated as a copy of the same syntactic object that are merged to build a larger syntactic structure.

The crucial part of the shift from GB to MP with regard to pro-drop is the specification of Infl/Agr head. The MP views Agr head uninterpretable in ϕ-features whereas *pro* interpretable. Holmberg (2005) notes that the movement from GB to MP

leaves two options in relation to the nature of *pro* and specification of Infl/Agr. The author formulates the two options into the following hypotheses (pp. 537-538).

(36) *Hypothesis A*
There is no pro at all in null subject constructions. Instead, Agr (the set of ϕ-features of I) is itself interpretable; Agr is a referential, definite pronoun, albeit a pronoun phonologically expressed as an affix.

Hypothesis B
The null subject is specified for interpretable ϕ-features, values the uninterpretable features of Agr, and moves to Spec, IP, just like any other subject. This implies that the nullness is a phonological matter: the null subject is a pronoun that is not pronounced

Under Hypothesis A, Agr head is strong with certain valued features: ϕ-features, interpretable Case feature, and possibly EPP feature. With these features, there is no need to project Spec-TP since *pro* has been incorporated into Agr head. A number of authors have proposed analyses of the appearance of *pro* in different languages under this view (e.g., Alexiadou & Anagnostopoulou 1998; Manzini & Savoia 2002; Borer 1986, Platzack 2003, among others). In contrast, Hypothesis B suggests that *pro* is independent from Agr head in that it has the inherent ϕ-features which may be comparable to a DP. Otherwise, it is a weak pro that is projected by the functional head to its Spec position. Under this view, pro may obey EPP requirements by being raised to fill Spec-TP (Holmberg 2005; 2010; Sheehan 2006; Holmberg & Sheehan 2010).

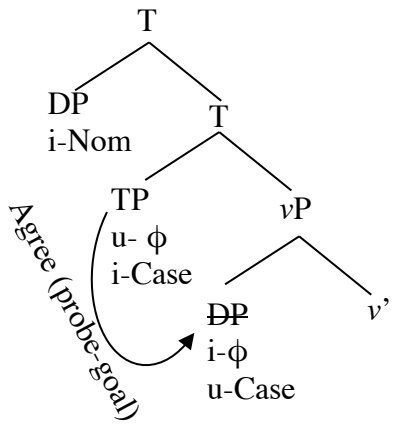
3.5.1. *Agree* and the Interpretability of Features

The Minimalist Program considers agreement as one of the main tools in the derivation of a sentence. MP views that lexical items enter a derivation with certain features that can be uninterpretable/unvalued or interpretable/valued (Chomsky 2001). For example, a pronoun (including pro) is viewed as a lexical element with inherent

valued/interpretable ϕ-features. In contrast, the functional head T (INFL/Agr head) has the uninterpretable/unvalued features. Under the principle of economy, a lexical item that enters a derivation has to contribute to full interpretation (Chomsky 1995:137). This suggests that any uninterpretable/unvalued features have to be converted into interpretable ones; otherwise, the derivation crashes (Chomsky 1995). Chomsky (2000) introduces *Agree* as the operation that is responsible for the conversion (valuation) with a further refinement by Pesetsky and Torrego (2007).

Forced by the interpretability requirement, the functional head T has to find a DP to value its uninterpretable ϕ-features. T becomes a probe and searches for a goal (DP) within its domain. This means T has to search down to VP where a DP is base-generated (i.e., the external argument). Once checked, DP values the uninterpretable features of T. Constrained by optimal derivation, DP deletes the uninterpretable ϕ-features of T once the valuation/Agree completes. The result is that DP and T are matched in interpretable ϕ-features. In addition, a DP in languages like English normally has an unvalued Case feature that has to be valued by T. Hornstein, Nunes, and Grohmann (2005) consider Case valuation a byproduct of Agree. In other words, once T receives a valuation of the ϕ-features, it values the Case feature of an NP as well. As shown in (37), once DP agrees with T in ϕ-features, DP moves to Spec-TP (marked with the strikethrough) to be valued for the nominative Case. Note that under GB, Case is assigned by the functional head, not by feature checking as in MP.

(37) *Agree* operation



Later developments have shown that *Agree* is detached from movement (Chomsky 2001). An overt movement is deemed to be necessary if it contributes to an optimal derivation (Chomsky 1995). For example, in addition to Case valuation, an overt movement can take place if it is to satisfy the EPP requirement. Moreover, like a DP movement to Spec-TP for nominative Case, an internal DP argument can move to receive an Accusative Case valuation. This involves another *Agree* operation between the functional head *v* and the internal DP. *v* head is set as a probe that searches for a DP in the internal argument position of VP. *v* head and the internal argument enter into the checking relation where the DP values the ϕ-features of *v*. Once the operation is completed, the DP moves covertly (at LF) to receive the valuation from *v* head, at least in SVO languages like English.

In the sub-sections that follow, I review some scholars who have taken the Minimalist framework of *Agree* further in explaining the derivation of pro-drop in different languages.

3.5.2. Previous accounts

3.5.2.1. Holmberg (2005)

Holmberg provides an *Agree*-based account that focuses on the asymmetry between null referential and null generic pronouns in Finnish. Holmberg observes that Finnish pro-drop displays asymmetry between 1st and 2nd referential pronouns, and the 3rd pronoun forms. While the former pronouns are usually dropped, the third person ones are restricted. The context where the 3rd person forms can be null is when they appear in an embedded clause as in (39). In contrast, Finnish speakers normally dropped the third generic pronoun as shown in (38).

(38) *Nyt täytyy pestä autonsa.* (Holmberg 2005:550)

Now must wash car-POSS.RFL

'One must wash one's car now.'

(39) *Oppilas tieää ettei pysty ratkaisemaan tehtävää.* (Holmberg 2005:551)

Student knows that-not can solve assignment

'The student knows that [he] can't solve the assignment.'

Building on Déchaîne and Wiltschko (2002), Holmberg (2005) suggests that null pronouns can be classified into three types: DPs, ϕPs, NPs. Null DPs are considered pronouns that have coreferential features which include the 1st and 2nd person pronouns. They can appear as independent pronouns or grammatical DP subjects. The 3rd person pronouns are those of ϕP types. They are weak forms with inherent ϕ-features, in the sense of Cardinaletti and Starke (1999), and they lack D-feature (Definite feature). Given that, they cannot establish a coreferential relation and are dependent on another NP with a

valued D-feature. The third type of pronoun is associated with bare NPs and is built on Tomioka (2003). Bare NPs come out from the lexicon with no values and remain constant for semantic interpretation.

Holmberg, however, posits that there is an asymmetry among the referential pronouns in Finnish, and it is due to the degree of D-feature the pronouns have. The 1st and 2nd null subjects can appear because they are DPs and are deleted in Spec-TP for having salient [+speaker/+addressee] features incorporated in T. The fact that the 3rd referential form as in (39) can be null is that it is bound by another NP argument from the higher clause. If not, they have to be overtly realized. Otherwise, they appear covertly with a default generic interpretation because of the lack of D-feature on the functional head T.

According to Holmberg, the appearance of null referential and null generic pronouns can be formulated in the following *Agree* operation. *Pro* as in (39) is ϕP by default that needs to agree with the NP of the matrix clause for a definite feature. Once the co-indexation is established, it inherits the definite feature of the higher NP and becomes definite. It is then raised to the local Spec-TP for EPP feature checking. Unlike the 1st and 2nd person null pronouns, the ϕP *pro* cannot be incorporated into T because of the D-feature it has already inherited from the higher NP. In contrast, the null generic pronoun in (38) can appear freely because T neither has D-feature to value *pro* nor higher NP that can transfer the same feature to it. As a result, when the *Agree* operation takes place, T absorbs all ϕ-features of *pro* and easily incorporates it. The incorporation forms a chain and only the higher chain is visible (i.e., pronounced) in the form of the Agr head (i.e., agreement morpheme).

3.5.2.2. Miyagawa (2010)

In an effort to bridge the discrepancy between agreement-based and non-agreement languages, Miyagawa proposes a unified theory of *Agree* (Chomsky 2000; 2001). His theory basically argues that languages are similar in that they have both agreement and discourse features. The difference lies in the functional heads (i.e., C, T) that host the features and in what functional context the features trigger movement. In Miyagawa (2017a), the author proposes that the features include ϕ-agreement features and δ-discourse features (topic/focus). These features are stored on C that can be transmitted to T for further agreement operation within a sentence domain, following Chomsky's (2000; 2001) C-to-T feature inheritance. When an *Agree* operation takes place, each becomes either ϕ-probe or δ-probe that is ready to search for a goal.

Building on Chomsky's *Uniformity Principle* (40a), Miyagawa (2010:11) proposes that "all languages have both kinds of grammatical features: ϕ-features and topic/focus features" which leads to his strongest version of uniformity principle (40b).

(40) a. *Uniformity Principle* (Chomsky 2001:2)
In the absence of compelling evidence to the contrary, assume language to be uniform, with variety restricted to easily detectable properties of utterances.

b. *Strong Uniformity* (Miyagawa 2010:12)
All languages share the same set of grammatical features, and every language overtly manifests these features.

Based on the strong uniformity principle, Miyagawa suggests that the topic/focus feature participates in an *Agree* relation in a similar way to the regular Spec-Head *Agree*. In this context, a discourse topic can trigger A-movement. As such, the topic should be

situated as a topic of a sentence that undergoes A-movement (i.e., left-dislocation) and targets the functional head T as shown in the following example in Japanese.

(41) *Zibun-zisin-o$_i$ Taroo-ga t_i hihansi-ta* (Miyagawa 2010:15)

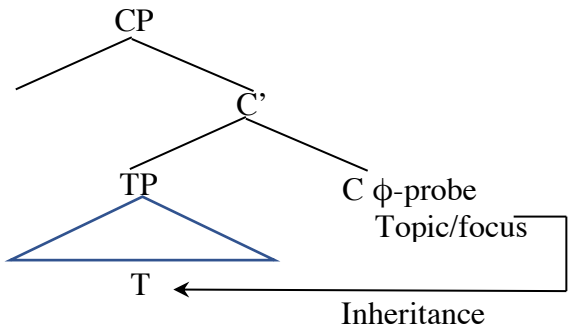
self-ACC. Taro-NOM criticize-PAST

'Self, Taro criticized.'

According to Miyagawa, this is managed by T that inherits the ϕ-agreement features from C. The agreement features (i.e., ϕ-feature and/or δ-feature) that are stored on C should be uninterpretable for T to be a probe that subsequently searches for a goal DP with the matching interpretable features locally. Once checked, DP values the uninterpretable features. In turn, the nominal category is raised to Spec-TP. According to Miyagawa (2010), If a language has a topic marker at C as in Japanese or Korean, a DP can be raised further to the CP domain. The author, however, notes that the raising in fact depends on whether the languages have EPP requirements. In the case of discourse-configurational languages such as Japanese and Korean, EPP features can also be the property of the CP head.

Miyagawa assumes that while C with ϕ-agreement features can enter into an *Agree* relation at a distance with a DP, it can participate in a local *Agree* relation as well. This is performed by inheriting the ϕ-agreement (including topic/focus features) to T. He suggests that the latter option is preferable because it maintains the minimalist principle of locality. Miyagawa's (2010:19) version of C-to-T feature inheritance is sketched in (42).

(42) Topic focus feature inherited by T



In relation to pro-drop languages, Miyagawa further suggests the following. For languages with defective T, Agr head can be raised to T position by which T is enabled through the feature inheritance. T then becomes a probe that can search for a nominal goal for feature checking. This is formulated under the *Probe Goal Union* (Miyagawa 2010:35) which necessitates the movement of a goal to a probe position to merge with it and value its uninterpretable features. Such head-to-head movement, according to Miyagawa, can be operated if the goal is also the head of the merged construction. It should be noted that such Agr head is a pronoun on itself as suggested by some authors (notably Alexiadou and Anagnostopoulou 1998). Thus, for pro-drop languages like Italian and Spanish, PGU can be attained since they meet the following conditions. First, they should have rich agreement features. Second, they allow V-to-T movement where the verbal inflection heads the syntactic object projection.

3.5.2.3. Sigurdðsson (2011)

Along the same lines of analysis is Sigurdðsson (2011). Sigurðsson proposes *C/edge linking feature*, a discourse-related feature that situates above TP and below C. C/edge link denotes the position where certain discourse features (i.e., speaker, hearer,

topic features) appear. Any null arguments need to be linked to one of these features in order to get the definite interpretation. Sigurðsson argues that agreement alone cannot be justified for licensing a null argument. In the case of 3rd person pronouns, the reference cannot be established solely from a pronominal marker. It has to be related to entities stated previously or implied by a discourse context/topic, a position that is in accord with several other authors (e.g., Cole 2009; Samek-Lodovici 1996).

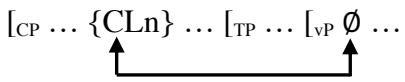
Sigurðsson, however, notes that the degree of C/edge linking in relation to pro-drop depends on the strength of agreement as well. The author identifies languages like Italian as those with visible/overt ϕ-features whereas those like Chinese have invisible/silent ϕ-features. An *Agree* operation in languages with overt ϕ-features is managed directly by linking ϕ-features from Agr/T to the C/edge link domain. So, an internal ϕ-agreement between the functional head T and *pro* can take place. Conversely, languages with invisible/silent ϕ-features have a greater C intervention that blocks a direct connection with the C/edge link. So, the *Agree* relation has to be performed at a distance between C/edge link and *pro* at vP.

The following sketches have been selected from Sigurðsson (2011: 286, 298) to illustrate how Agree operates under the C/edge link mechanism. (43) displays C/edge linking in languages with overt ϕ-feature like Italian and (44) illustrates those with silent ϕ-feature like Chinese.

(43) Italian

$[_{CP}\ldots\ \{CLn\}\ \ldots\ [_{TP}\ldots\ [_{CP}\ \ldots\ \{CLn\}\ \ldots\ [_{TP}\ \emptyset\text{–}T_{\Phi}$

(44) Chinese



Sigurðsson's proposal shares with Miyagawa's (2010) how features are transmitted from C domain to T. The difference is that Miyagawa considers that C hosts both agreement and discourse features that can be transmitted to T or vP. Sigurðsson provides an intermediate stage between C and TP where each discourse feature (i.e., speaker, hearer, or topic) can be linked to TP or vP head through the so-called C/edge link element.

3.5.2.4. Frascarelli (2007)

In the same spirit of *Agree*-based analysis, Frascarelli proposes that there is a relationship between discourse topic and pro-drop as observed in Italian continuous speech. Frascarelli (2007) discusses specifically how topic is related to the appearance of referential null subjects. Frascarelli (2007:694) sets forth her framework into the following characteristics of *pro* (45). Null and overt subject pronouns can be accommodated into (a) and (b) categories perfectly, but they cannot be incorporated into (c) category which does not obey Principle B of the binding theory.

(45) Properties of *pro*

a. It has a θ-role, when selected by a verb;

b. It has ϕ-features and Case;

c. It is subject to Principle B.

The author assumes that null and overt referential pronouns are different in certain distributions with respect to (45), at least in the pro-drop languages like Italian. To provide evidence for the argument, Frascarelli (2007:695) provides some examples of the distribution of the null referential pronouns compared to the overt ones in Italian. The sentences in (46) show that A-topic, but not the higher clause NP, binds the null subjects.

(46) a. *Jim andrà se *lui/pro si sentirà bene*.

Jim will go if he feels well.

b. **Lui/*pro andrà se Jim si sentirà bene*.

*He will go if Jim feels well.

c. *Se *lui/pro si sentirà bene Jim andrà*.

If he feels well, Jim will go.

d. *Se jim si sentirà bene *lui/pro andrà*.

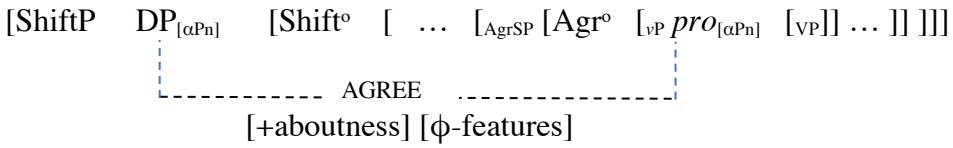
If Jim feels well, he will go

With such observation, Frascarelli proposes that there is a link between topic and *pro*-drop. The topic in question is the Aboutness topic which is usually an NP that is introduced in the previous sentences and reintroduced into the following sentences (Reinhart 1982; Lambrecht 1994; Givón 1983). When the Aboutness topic is carried on through the following clauses, it can be null. According to Frascarelli, the omission of the subject in the following sentences indicates topic continuity, following Givón (1983).

Frascarelli notes that her framework involves long-distance agreement. It involves CP head probing vP directly to value the ϕ-features of a (pro)noun. Frascarelli adds, "the shift^{o} head is endowed with an [aboutness] feature, acts as a probe and agrees with the goal *pro,* so that its uninterpretable features are valued" (p.718). It can be assumed that

once Agree is established, *pro* becomes definite for being coindexed with the topic. This *Agree* framework is sketched below (Frascarelli 2007:718).

(47) Frascarelli's Agree framework



Frascarelli's *Agree* framework proceeds as follows. Topic is base-generated in CP domain, reflecting CLLD (Clitic Left Dislocation). So, when there is a preverbal subject, it should be conceived of as a syntactic element situated outside a sentence boundary. The subject element serves as the antecedent for null subjects in A-position through "copying of ϕ-features through Agree" (p.716). In that sense, a topic NP has the ϕ-features which can be transmitted directly to a referential null pronoun in a sentence. Agr head is considered filled with EPP and Case features that enter into an *Agree* operation for structural position. So, there is little contribution to phi-agreement. The long Agree operation, however, may violate Phase Impenetrability Condition i.e., only heads and the edges are visible to a further operation. Frascarelli notes that when the process is held for feature checking purposes and no element with the identical ϕ-features intervenes, the *Agree* relation is legitimate. After all, Frascarelli continues, ϕ-agreement features are inherently derived from C which is regarded as *ϕ-complete* in view of Chomsky's (2000:8) *Agree* framework.

3.6. Typology of *Pro*-drop Languages within the Minimalist Program

Recent studies of pro-drop have shown that there is a variation among pro-drop languages. It ranges from those like Italian with rich agreement morphology to those like

Chinese that lack agreement at all. It also includes those that drop subjects freely like Chinese to those that have some restrictions like Finnish. In the spirit of the Minimalist Program, Biberauer et.al. (2010) have classified these languages into Consistent, Partial, and Radical null subject (NS) languages. In what follows I discuss in detail the main characteristics that distinguish them.

3.6.1. Consistent NS Languages

The languages under this category are associated with their consistency in dropping the referential subject pronouns (i.e., first-, second-, and third-person pronouns) in different contexts. Italian, Spanish, European Portuguese and Greek are examples of the languages. These languages are also characterized as having rich agreement in which their verbs agree with the subjects in all ϕ-features (person, number or gender). Consider Italian verbal conjugations for three-person paradigm in (48), in addition to (17). Bearing in mind the status of the agreement marker, each verb can be considered a grammatical clause with an argument (subject) incorporated in it.

(48) *bev-**o*** 'I drink' (Roberts & Holmberg 2010:6)

*bev-**i*** 'you drink'

*bev-**e*** 's/he drinks'

In addition to being rich in agreement, consistent NS languages normally have strict interpretation of null subjects in embedded clauses (Holmberg 2010). The null subjects always take immediate higher NPs as the antecedents. To exemplify this, consider the following sentences in Italian (from Roberts & Holmberg 2010:7) and

European Portuguese (from Barbosa 2011a:572), represented as (49) and (50) respectively.

(49) *Il professore ha parlato dopo che (lui) e arrivato.*
The professor has spoken after that (he) is arrived
'The professor spoke after he arrived.'

(50) *[O João] disse que [_] comprou um computador.*
The João said that bought a computer
'John said that he bought a computer'

According to Roberts & Holmberg (2010), the use of overt and null pronouns serves different functions. For example, Italian uses the full form *lui* 'he' to emphasize a specific referent. The authors also mention that the overt subject can take an entity outside the sentence as its antecedent as well. They show that the same interpretation holds for English as seen from the equivalent translations. In contrast, when the subject is unexpressed it only refers to the NP mentioned in the previous or higher clause.

The third aspect that characterizes a consistent NS language is the presence of a null topic that binds the interpretation of a null subject. Holmberg exemplifies such a topic in the following sentences in Italian, adapted from Samek-Lodovici (1996).

(51) a. *Questa mattina, la mostra è stata visitata di Gianni. Pìu tardi *Ø/egli/lui*
This morning the exhibition was visited by Gianni. Later he/he
ha visitato l'università.
visited the university
'This morning the exhibition was visited by Gianni. Later hi visited the university.'

b. *Questa mattina, Gianni ha visitato la mostra. Pìu tardi Ø ha visitato*
This morning Gianni visited the exhibition. Later visited
l'università.
the university.
'This morning Gianni visited the exhibition. Later (he) visited the university.'

According to Holmberg, there is normally a topic base-generated in the local C domain of sentences like (51). Holmberg (2010:96) assumes that this topic is an A-topic that is locally present in the previous clause. It is copied into the left-periphery of the following clauses which is linked to the null subjects. The author points out that when the topic is present at the local C domain, it promotes the appearance of null subjects in the clauses as in (51b). In contrast, if the subject is transposed to a non-topic position (non-C domain) in the previous clause as in (51a), the overt form is used. Holmberg suggests that the topic construction determines the appearance of the null subject, which is in line with Frascarelli (2007) and Samek-Lodovici (1996).

Holmberg (2005; 2010) notes that the third person null subject pronouns in consistent languages always have definite interpretations. This can be explained by the presence of an unvalued D-feature on the functional head T. The uD-feature necessitates valuation, which is performed by agreement with the previous topic that has a valued D-feature. Once the topic values the D-feature of a pronoun it becomes definite, which results in the omission.

To sum, there are three characteristics of consistent NS languages as seen from the Romance languages described above. Firstly, the speakers of the languages consistently drop the referential pronouns, and the languages have a rich verbal agreement paradigm. Secondly, the appearance of null subjects in embedded clauses is

always coreferential with higher clause NPs. Thirdly, a null subject is normally linked to a topic NP (overt/null) that appears at the left-periphery of a clause or a sentence. Of these characteristics, the first one appears to be the main nature of a consistent NS language discussed in the literature of null subject languages.

3.6.2. Partial NS Languages

This type has been classified by some authors as having restrictions on dropping referential pronouns (Barbosa 2011b; Holmberg 2005; 2010; Ackema et.al. 2006; Holmberg, Nayudu, & Sheehan 2009). Languages of this type include Finnish, Marathi, Brazilian Portuguese, and Hebrew. Although most of these languages have full agreement in person and number, they typically do not drop the 3rd referential pronouns as freely as the consistent NS languages do.

In general, there are three characteristics that make the partial NS languages different from the consistent languages (Holmberg 2005; 2010; Holmberg, Nayudu, & Sheehan 2009). First, they allow only 1st person and 2nd person pronouns to be dropped freely in the subject positions of finite clauses. Consider the following examples from Finnish (Holmberg 2005:539) and Hebrew (Gutman 2004:464-465).

(52) Finnish

a. *(Minä) puhun englantia.*
I speak-1SG English
'(I) speak English.'

b. *(Sinä) puhut englantia.*
You speak-2SG English
'(You) speak English.'

Hebrew

a. *pro nixshalti ba-mivxan be-historia.*
failed-1st-SG in-the-test in-history
'I failed the history test.'

b. *pro nixshalta ba-mivxan be-historia.*
failed-2nd-SG-M in-the-test in history
'(You) failed the history test.'

c. **(Han) puhuu englantia.*
He/she speak-3SG English
'(He) speak English.'

c. **pro nixshal/nixshela ba-mivxan be-historia.*
failed-3rd-M-SG/F-SG in-the-test in-history
'(He)/(She) failed the history test.'

The restriction on dropping the third referential pronouns has become the main aspect that distinguishes the partial NS languages from the consistent ones (Holmberg 2010; Holmberg, Nayudu, & Sheehan 2010). According to the authors, this fact has formal implications as described by Holmberg (2005) for Finnish above. One of which has to do with the degree of D-feature on the functional head T. The partial NS languages like Finnish do not have a D-feature on T. So, the third person pronouns have to be overtly realized. Otherwise, they are coreferential with the matrix NPs which comes as the second characteristic.

These languages can still drop the 3rd person pronouns, but it should be in the context where the null subject is bound by an NP of the higher clause. The authors indicate that this has been the only context where the NS gets its definite interpretation. Otherwise, the pronoun would resume to the default indefinite value. The following examples illustrate the embedded null subjects in Brazilian Portuguese (53) and Marathi (54).

(53) *O João$_1$ disse que (ele$_1$) tinha comprador uma casa*
The João said that he have.PST.3SG bought a house
'João said that he had bought a house.'

(54) *Ram$_1$ mhanala ki (tyani$_1$) ghar ghetlə*
Ram say-PST.3SM that he house by-PST.SN
'Ram said that he bought a house.'

(Holmberg & Sheehan 2010:131)

As can be seen, the subjects of the embedded clauses can be omitted provided that their contents can be recovered by co-indexation with the higher clause NPs. As mentioned before, such anaphoric relation is necessary since languages like Finnish do not have an unvalued D-feature on T. It can be said that, through co-indexation, the subject of an embedded clause inherits the definite feature from the matrix NP. Holmberg, Nayudu, and Sheehan (2009) argue that at least the three languages (Finnish, Brazilian Portuguese, Marathi) share the appearance of null subjects in embedded clauses that has to be bound by matrix NPs. Nevertheless, the authors note that it does not disregard the fact that there is a variation among languages that are considered partial NS languages in this respect.

Third, the partial NS languages always drop generic or indefinite subject pronouns. According to Roberts (2010) and Holmberg (2010), the consistent dropping of generic pronouns can also be explained by the defective T that does not have a D-feature. So, the third person pronoun retains the inherent generic/indefinite features once it is incorporated into T resulting from the ϕ-agreement with *pro*. To illustrate this, Holmberg provides the following examples in European Portuguese (EP) and Brazilian Portuguese (BP) in (55) and (56) respectively.

(55) *É assim que* ***se*** *faz o doce* (EP)
is thus that SE makes the sweet
'This is how one makes the dessert.'

(56) *É assim que faz o doce* (BP)
is thus that makes the sweet
'This is how one makes the dessert.'

(Holmberg & Sheehan 2010:128-129)

As can be seen, the generic pronoun *se* in EP, which is a clitic itself, has to be expressed phonologically, compared with its counterpart BP. According to the authors, the reflexive clitic *se* of EP in (55) has to be inserted to recover the generic interpretation of the null pronoun. Otherwise, the clitic may act as the generic pronoun by default which is normally realized phonologically. This is not the case for BP which can drop the generic pronoun without resorting to another element that determines its null appearance. What (56) displays is that partial NS languages have third person null subjects that always appear with generic interpretation.

So far, partial NS languages like Finnish and Brazilian Portuguese can be differentiated from the consistent ones like Italian and European Portuguese in three respects. First, they normally drop 1st and 2nd referential pronouns, but not the 3rd ones. Second, the 3rd person referential pronouns can still be dropped but only when they appear in embedded clauses and take NPs in the higher clauses as the antecedents. Third, the partial NS languages always drop generic or impersonal pronouns, equivalent to English-*one*.

3.6.3. Radical NS Languages

The term radical NS is introduced in the current theory of null subjects for languages that drop any kinds of pronouns or NPs in a massive way (Neeleman and Szendro˝i 2007). Chinese, Japanese, Korean, and Thai are examples of languages of this category.

There are three characteristics of radical pro-drop languages. The first and obvious nature of this kind of language is lack of verbal agreement. According to Roberts

(2010), given the absence of verbal agreement, it is predicted that the null subjects and their interpretations are controlled or bound by discourse topics. This has become the second characteristic of these languages. For illustration on topic-bound null arguments, see (19) and (32ab) provided by Huang (1984).

Roberts (2010) provides the following formal explanations for radical pro-drop languages. Unlike the consistent and partial NS languages, the radical pro-drop languages lack unvalued ϕ-features on the functional head T. As such, the only source for *pro* to be valued is by coreferential with a discourse topic. If not, it should be bound by a matrix NP argument as shown in (57) for Korean.

(57) *John- Mary-eke [[pro Kathy-lul salanghan-ta] ko] hayssta.*

Nom Dat Acc love Comp said

'John told Mary that (he) loves Kathy.' (Kim 1992:27)

The third aspect that characterizes a radical NS language is the presence of bare NPs. Roberts (2010) notes that since ϕ-features are absent in the functional head of radical pro-drop languages, it can be assumed that *pro* in these languages may not have specific values. What Roberts assumed has been built on Tomioka (2003) who proposes that null arguments in discourse-prominent languages are bare nouns because they lack D-property (i.e., coreferential feature in the sense of Holmberg 2005). Roberts suggests that since the functional head lacks ϕ-features, *pro* cannot be considered a goal in the first place. Building on Saito (2007), Roberts suggests that the content of *pro* in this regard should be part of LF specification.

It is obvious that the radical NS languages are different from the consistent NS and partial NS languages in three respects. First, they do not have verbal agreement

morphology. Second, only by being bound to a discourse topic or a matrix NP can the content of a null subject be identified. Third, the pro-drop languages have null bare NPs whose interpretation is specified at LF or discourse context.

3.7. Topicality

3.7.1. Topic

A topic can be identified as discourse topic and sentential topic. Following Reinhart (1982) and Lambrecht (1994), the notion of topic in question is sentential or clausal topic. A sentential topic is what a sentence is about (Reinhart 1982; Lambrecht 1994). As these authors note, the aboutness of a sentence should be represented by a linguistic expression which is different from a discourse topic which can be abstract (i.e., implied by a discourse context). In fact, "different expressions of the same sentence can serve as a topic in different contexts of utterance" (Reinhart 1982:3). Lambrecht (1994) notes that topic and subject may be largely related to one another, but they should not be reflecting each other. For example, in topicalization where an object is fronted, the object is the topic of a sentence, not the subject of the sentence. Topic position in a sentence as shown in (51) for Italian illustrates this idea. Another property of a topic is that it should be associated with old information: what has been said or mentioned which has set the background information. Since a topic denotes old information, it should also be definite (van Gelderen 2013).

Topic construction varies among languages but most of them involve left- or right-dislocation (Givón 1983). By this, a topic can be part of a topicalization strategy. It can be moved to the left or right periphery of a sentence or base-generated at one

periphery of the sentence. Topic constructions in languages like English and Italian involve topics that are base-generated in the left-periphery of a sentence or in the CP domain (Rizzi 1997; van Gelderen 2013). Topic building in languages like Chinese may involve fronting an object to the left periphery of a sentence as shown in (33).

There are two common ways to determine whether a topic is base-generated in the periphery of a sentence (CP domain) or not. First, the topic is situated outside a sentence domain that can be marked by the presence of a resumptive pronoun which is coreferential with it. This means an NP that precedes the sentence is not in the argument position. According to van Gelderen (2013), in languages like English, it can also be marked by phrases like *As for* or *that guy* as in (58) with a distinctive prosodic pattern (e.g., intonation). Second, topicalization by movement is sensitive to island structures. Cinque (1990), building on Chomsky (1981), mentions that since topicalization reflects *Wh*-movement, it should be subject to subjacency conditions which may not apply for adjunct clauses (i.e., islands). This is shown in (59) which I will elaborate in the following sub-section.

(58) That guy, I hate him. (van Gelderen 2013:173)

(59) *Gianni$_i$, che dovranno convocare anche il poliziotto che lo$_i$ ha arrestato*
Gianni, who they will also have to summon the policeman who arrested him
prima di poter interrogare e_i, …
before they will be able to interrogate (Cinque 1990:113)

Frascarelli and Hinterhölzl (2007) distinguish topics into three categories: Aboutness, Contrastive, and Familiar Topics. Since the Aboutness topic has been defined earlier, I focus on the other kinds of topics. Contrastive topic provides contrast between

one topic and the other topic which shows a switch from one topic to another topic. A familiar topic is regarded in view of Givón's (1983) topic continuity. It is a topic that has been established previously and has become familiar to the speech participants. According to Frascarelli and Hinterhölzl, this kind of topic normally receives less phonological emphasis to indicate the relationship between the first and the latter mention of a topic.

Lambrecht (1994) notes that the term topic may not contrast a referent of a topic with its linguistic representations. The author suggests *topic referent* and *topic expression* (Lambrecht 1994:128). A topic referent refers to an NP that becomes a topic since it carries and introduces aboutness information. When there are other NPs or pronouns that are introduced and are coreferential with the topic referent, they are the topic expressions. According to Lambrecht sentences like (60) can have different propositions realized through the predicates but the referent (i.e., what it is about) remains the same. *Pat* in the two sentences is the topic referent that is represented in the embedded clauses as topic expressions (i.e., pronouns).

(60) a. Pat said SHE was called.

b. Pat said they called HER.

3.7.2. Topic and *Pro*-drop

If the relation between a topic referent and topic expressions is extended to pro-drop, it is plausible to assume that topic expressions may not be realized. Givón (1983) notes that the more continuous or accessible a topic is the less linguistic coding is given. Givón (1983:18) illustrates this in relation to the scalar representation between stressed

pronouns and unstressed pronouns shown in (61). Unstressed pronouns are used when a topic is highly accessible, compared to when it is less accessible. Zero anaphora marks a highly relevant topic. When a topic is discontinued, contrasted, or switched, full NP forms are used.

(61) *More continuous/accessible topics*

Zero anaphora

Unstressed/bound pronouns ('agreement')

Stressed/independent pronouns

Full NP's

More discontinuous/inaccessible topics

In line with Givón (1983) is the cognitive accessibility of information proposed by Ariel (2001). According to Ariel (2001), a referring expression (which I assume as topic expressions in the sense of Lambrecht 1994) indicates that a Given/Old information is accessible to a speaker or hearer. However, the degree of their use determines the degree of the accessibility of information (i.e., topic). Ariel (2001:32) puts "…the more informative, rigid and unattenuated an expression is, the lower the degree of accessibility it codes….." According to Ariel, NP (e.g., names) has less accessibility of information than zero linguistic expressions.

I refer to accessibility of information as accessibility of topic referent in the spirit of Lambrecht (1994). Provided that a topic referent is accessible to a speaker and an addressee, it is not necessary for its linguistic expressions to be realized phonologically. This is what has been seen so far in languages like Chinese. Adopting Tsao's (1977) claim of topic NP deletion, cited in Huang (1984:549), Huang mentions that the

appearance of null pronouns in the subsequent clauses of a paragraph like (62) indicates a topic chain.

(62) [Zhonggou, defang hen da.] [*e*, renkou hen duo.] [*e*, tudi hen
Chine place very big population very many land very
Feiwo.] [*e*, qihou ye hen hao.] [, women dou hen xihuan.]
fertile climate too very good we all very like
'(As for) China, (its) land area is very large. (Its) population is very big. (Its) land is very fertile. (Its) climate is also very good. We all like (it).'

This all has shown that a topic, either sentential or discourse one, may contribute much to the omission of arguments. Since a topic is given or old information, provided that they are represented in the linguistic expressions, they may need to be omitted.

3.7.3. A'- / A-topic Distinction

Safir (1984:604) defines A-position as any position that has the grammatical/structural positions like subjects or objects whereas A'-position denotes the non-structural positions. Building on this conception, it can be said that A-topic is situated in argument/structural position whereas A'-topic in non-argumental/structural position. Assuming with Lambrecht (1994) and Reinhart (1982), the subject (i.e., NP) of a sentence would be considered an A-topic which has reference expressed by pronouns (overt/null). Compare (62) and (51b) repeated here as (63) for explanatory purposes.

(63) *Questa mattina, Gianni$_i$ ha visitator la mostra. Piú tardi, e$_i$/$^{?}$egli$_i$/$^{??}$lui$_i$ ha*
This morning, John has visited the exhibition. More late, (he)/he/he has
visitato l'universitatá.
visited the university.
This morning, John visited the exhibition. Later on, he visited the university.

(From Samek-Lodovici 1996:31-32)

In (62), the higher NP becomes the topic and situated outside the sentence. In (63), it is the temporal adverb that sits outside the sentence whereas the subject NP appears inside the sentence domain. It can be assumed that the topic in (62) is an A'-topic whereas in (63) an A-topic. If the same notion of A'-topic as in (62) is rigidly applied to (63), then the temporal adverb 'this morning' is the topic, which is possible depending on the context (See Lambrecht 1994 for this possibility). In fact, only topic NP can be resumed or represented by pronouns as seen in the two examples, not the adverbial phrase. An NP, compared to an adjunct, plays a major role in a topic promotion in this regard.

A'-topic may involve movement whereas A-topic may be base-generated in-situ. Cinque (1990) notes that *Wh*-movement can be extended to topicalization and relativization since they involve movement from an A-position to A'-position. In contrast, A-topic can be associated with an NP that has been base-generated in an argument position. Thus, a subject NP is a topic in the sense of Lambrecht (1994). However, when the subject-topic is reintroduced as a familiar topic to the following sentences in the sense of Frascarelli (2007), it should appear at the left periphery of the following sentences, either as an overt or null topic.

At this juncture, it may be hard to distinguish between A-topic and A'-topic since both topics appear at the left periphery of sentences. Consider the LF representations of the null topic in (34) proposed by Huang (1984), repeated here as (64), and that of (63) suggested by Holmberg (2010:96) in (65).

(64) [Top e_i], [Zhangsan shuo [Lisi bu renshi e_i]].

Zhagnsan say Lisi not know

'*[Him$_i$], Zhangsan said that Lisi didn't know e_i.

(65) [CP<Gianni$_1$> [questa mattina Gianni$_1$ ha visitato la mostra]].

[CP <$Ø_2$> [pìu tardi ha ϕP_2 visitato la mostra]] 1=2

As can be seen, the two topics are identical in their positions. They appear as null topics at the left periphery of the sentences which can be associated with an A'-position. They can possibly be A-topics if Frascarelli's (2007) topic chain is taken into account. In addition, it can be said that both topics are built from the previous mention in accordance with the nature of a topic defined previously. Hence, the null topics in (64) and (65) are the object and subject of the previous sentences that have been reintroduced. The difference is that the null topic in (64) is the result of movement whereas that in (65) is base-generated at the left-periphery. I consider the latter to be the point of departure for the distinction between A-topic and A'-topic. Bearing in mind the latter difference, it is also necessary to suggest that A-topic can be resumed by a pronoun whereas A'-topic may not be as far as Chomsky's (1981) variable is considered.

The distinction between A'-topic and A-topic gives rise to the distinction between a variable and a null pronoun. According to Chomsky (1981) a variable is a syntactic object that is situated in A-position and locally A'-bound. There are three possible

interpretations that follow with regard to null arguments. First, a null argument that is bound by a topic in A'-position is a variable, regardless of whether the topic is moved or base-generated. Second, it is a resumptive pronoun in a sense that it is present in an argument position but happens to be coindexed with the topic. Third, it is a pronoun by its link to an A-topic which is the subject of the previous sentence in the sense of a topic chain.

Cinque (1990) takes on this issue and suggests that an empty argument position left by a movement should not be considered purely as a variable. Cinque's suggestion is that movement is subject to locality conditions. So, an empty position which is far away from a topic operator may not be the result of movement. Cole (1987:602) shows this for empty arguments that appear in island constructions in Imbabura Quechua as exemplified by (66).

(66) *Juan$_i$ yuyan [chay [Ø$_j$ pay-ta$_i$ / Ø$_i$ rijsishka] runa] mirkadu-pi kashka-ta.*

Juan thinks that he-acc knew man-acc market-in was-acc

'Juan$_i$ thinks that the (man)$_j$ who knows (him)$_i$ was in the market.'

(Cole 1987:602)

It can be said that the null argument in (66) has been base-generated in the NP island. It is thus a pronoun or more accurately a *pronominal variable* as suggested by Cinque (2009:98). A pronominal variable is base-generated in an island domain but happens to be coindexed with a topic antecedent. It should be clear now that a pure variable is different from a pronominal variable in that the former is restricted to non-complex structures.

This leaves us with the null arguments that appear in (62) and (63). Unlike (66), (62) and (63) involve successive sentences. Since a variable or a pronominal variable is concerned with sentential domains, it is possible to conclude that the null arguments in the two examples are pronouns. By definition, null pronouns indicate topic continuity or topic chain between sentences (Givón 1983; Frascarelli 2007). The null arguments are copies of the A-topic (subject-topic) introduced in the first sentence and reintroduced in the consecutive sentences.

To sum, A-topic is different from A'-topic in terms of their syntactic positions. A-topic situates in an argument position whereas A'-topic in a non-argument position. Under subjacency conditions, null arguments that are bound locally by A'-topic is a variable. When a null argument appears in an island and coindexed with A'-topic, it can be assumed as a pronominal variable. Finally, A-topic (topic-subject), but not A'-topic, can be copied to successive sentences and its presence can be marked by null pronouns.

3.8. *Pro*-drop in Serial Verb Constructions (SVCs)

3.8.1. SVCs

An SVC is commonly defined as a sequence of verbs that forms a single clause with a single argument without grammatical marking for coordination or subordination (Lovestrand 2021; Aikhenvald 2006; Collins 1997). In addition, an SVC may involve a single event with a single tense form (Collins 1997; Aikhenvald 2006; Agbedor 1994). Accordingly, all verbs that are in a sequence may share an argument (i.e., argument sharing). Consider the following examples in Ewe (67, 69) and Cantonese (68). (67) has two verbs that take a single subject whereas (69) has two verbs that share an object.

(67) *Me nya ɖevi-ɛ dzo*. (Collins 1997:461)

I chase child-DEF leave

'I chased the child away.'

(68) Ngo ceng keoidei sik faan. (Matthews 2006:73)

I invite 3pl eat rice

'I'm inviting them for dinner.'

(69) *Áma ku te ɖa ɖu*

Ama dig yam cook eat

'Ama dug up yams, cooked [them, and] ate [them].'

(Ameka 2005, cited in Lovestrand 2021:111)

The order of verbs in an SVC can be *contiguous* or *non-contiguous*. According to Aikhenvald (2006:37) the contiguous word order involves a sequence of verbs that appear next to each other. It forms a tight string that cannot be interrupted by another syntactic element as in (69). A non-contiguous SVC can be interrupted by another element as seen in (67) and (68) with DPs in between the strings.

SVCs can establish different functions and meanings of clause structures (Aikhenvald 2006; Lovestrand 2021). For the sake of relevance, I will discuss three of them. The first two are *cause-effect* and *complement clause* SVCs (Aikhenvald 2006:14-19). In a cause-effect construction, the first verb instigates an action which has the result or effect expressed by the second verb as in (67). A complement clause SVC has a structure which is comparable to the complement clause as in (69). The third function is consequential SVC. It expresses a sequence of events where one verb expresses an event that is a consequence of an event expressed by another verb as shown in (67).

3.8.2. Derivation of *Pro* in SVCs

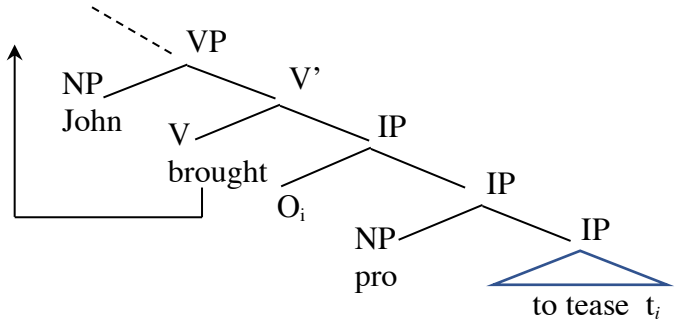
Some authors have proposed accounts on the appearance of *pro* in SVCs under generative framework (Baker 1989; Larson 1991; Agbedor 1994; Campbell 1996; Carstens 2002, among others). As far as I am concerned, many of the proposals have been based on Larson's (1991) analysis (Agbedor 1994; Campbell 1996; Carstens 2002, Lefebvre 1991; Collins 1997).

Larson (1991) provides a generative approach in analyzing the derivation of serial verb construction that is motivated by VP shell theory. According to Larson (1991:205), what seems to be SVCs can be explained by referring to the "secondary predication in English". In general, the underlying structure of an SVC can be represented by the structures of coordination (i.e., series of events that are coordinated), adjunction (conjunctive clauses), and subordination (causative / resultative / purposive clauses).

In terms of pro-drop, Larson does not provide an explicit discussion on the derivation. Instead, he suggests that all the structures proposed above for SVCs should be established on argument structure and θ-role projection. In that sense, every verb should be base-generated with a θ-position in the spirit of the Projection Principle as shown in the following Larsonian structure.

(70) a. Mary [VP brought John to tease] (Larson 1991:204)

b.



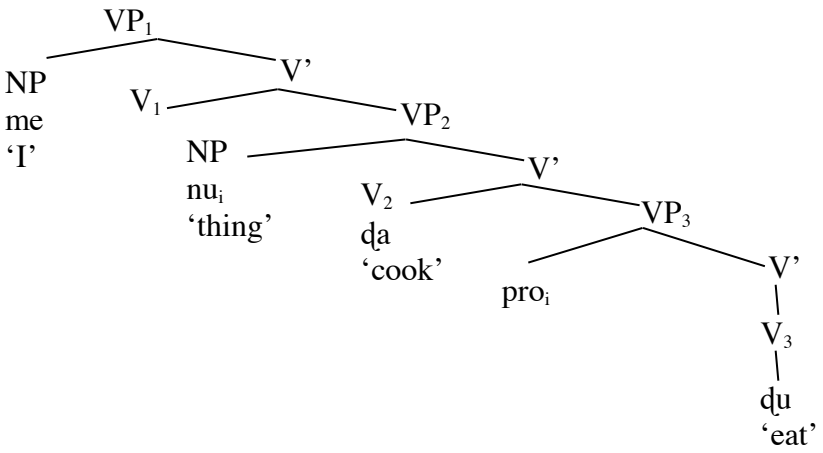
Sentence (70a) has the derivation as follows. θ-projection would motivate the verb 'to tease' to have a complement position and a specifier position for an external argument which is filled by *pro*. In a similar way, when the verb 'brought' is introduced into the derivation, it projects two θ-positions. They include *John* as the specifier and the IP complement that takes the empty object of the verb 'brought' as its complement. The empty object positions of the higher and lower VP (IP) are coindexed to each other in an operator-trace relation. In Larson (1988), this is assumed as the covert movement of objects for passive construction. Building on the VP-shell model (causative construction), the author shows that the verb 'brought' in (70b) is moved to the higher IP once Mary is introduced as a Causer. The resulting structure is (70a). I assume that *pro* in (70) can also be PRO depending on whether such structure involves a control verb or not.

Building on Larsonian analysis, some authors have proposed a few analyses on the derivation of *pro* in SVCs. They proposed that the types of verbs situated as verbs 1 and 2 determine how empty categories are present (e.g., Lefebvre 1991; Carstens 2002; Collins 1997). As an illustration, I refer to Collins (1997:491) who proposes that SVC like (71) in Ewe involves the projection of an empty direct object position by Case assignment.

(71) M-a ɖa nu ɖu.

I-FUT cook thing eat

'I will cook something and eat it.'



According to Collins, SVCs like (71) can be represented as a resultative/causative construction. The author postulates that the lower VP verb can be incorporated into the higher VP at LF to become a complex predicate. Being a complex predicate, both verbs (i.e., *da-du* 'cook-eat') assign the same external argument *nu* 'thing and internal argument which is a *pro*. This way dispenses with the need to have the object argument sharing proposed previously by Baker (1989). Such underlying structure demonstrates the interrelationship between predicates in which one event promotes or controls the occurrence of another event. According to Collins, structures like (71) have the interpretation that the two events are carried out by a single agent which together subcategorize a single theme.

As for how *pro* is licensed and interpreted, Collins concludes that the empty category is a *pro* (i.e., pronoun) since it always appears in a Case assignment position (i.e., accusative), following Rizzi's (1986) licensing condition. Collins notes that *pro* is

within the governing domain of the higher NP which c-commands it. Regarding the identification, Collins suggests that it is always coindexed with an NP in a higher structure which obeys Principle B of the binding theory.

I have shown in this section that, under Larsonian analysis, SVCs can be represented as the secondary predicate constructions in English. It is assumed under these constructions that SVCs can function as coordination, adjunct, and complement (resultative/purposive) clauses. This section also has shown that SVC is a potential context for the appearance of *pro*. Since an SVC is constructed by a sequence of verbs, every verb is a potential VP projection at the base generation. When the VP is projected, it comes with a theta-structure, building on Chomsky's (1981:36) *theta criterion*. Certain θ-projections are held throughout the derivation with empty positions that have a direct Case position assigned by the lower VP head. Finally, certain SVC structures may have V1 and it moves to a higher position and binds the lower constituents in the spirit of VP-shell. It then assigns agentive Case to a DP within its governing domain.

CHAPTER 4

TYPOLOGY OF NULL ARGUMENTS IN MAYBRAT

4.1. Introduction

Maybrat sentences are typically constructed without NP in the subject and object positions. The omission of subjects in Maybrat seems to share, but not exclusively, the pro-drop behaviors found in languages like Italian, Portuguese, and Spanish. These languages have been discussed widely in the literature for having null subjects that are conditioned by rich morphological agreement. The agreement functional head licenses *pro* and identifies the grammatical ϕ-features of it (i.e., person, number, or gender). Some verbs in Maybrat appear with underspecified agreement. That is verbs with the marker *m-* that agree in person, but not in number or gender. Furthermore, many verbs do not even have agreement morphology and appear as bare verbs (47.18% uninflected verbs of the total 498 verbs in Dol's 2007 glossary). It resembles the appearance of null objects as well as Maybrat lacks object-verb agreement. Altogether, Maybrat represents the agreement languages like Italian and Spanish with agreement as well as Chinese and Japanese for lack of agreement.

This chapter discusses the types, distribution, and interpretation of null arguments in Maybrat. It sets the stage for further analysis of the derivation of null arguments in Maybrat in the following chapter. It is organized into the following sections. Sections 4.2 and 4.3 present data on the types and distribution of the null subjects and null objects. In these sections I describe different contexts where the null subjects and null objects appear and how they are interpreted with respect to their distributions. Following these sections is 4.4 which discusses *pro* as observed in Serial Verb Constructions (SVCs).

Although this study is not focused on *pro* in SVCs, the appearance of *pro* in this construction is very common and will be dealt with at some points. Section 4.5 provides some notes on pro-drop in Maybrat. This section mainly highlights constraints on pro-drop described in Sections 4.2 and 4.3 which include other relevant aspects. Section 4.6 summarizes the chapter.

4.2. Null Subjects

This section mainly discusses the three major types of the null subjects that are observed in Maybrat which I have classified as ϕ-agreement *pro*, partial agreement *pro*, and subject *pro* with uninflected verbs. The first type focuses on the null subjects that appear with the verbs that are fully inflected with pronominal ϕ-features (i.e., person, number, gender). The second type illustrates the null subjects that appear with the verbs that have the underspecified agreement (i.e., only person feature). The third type involves the appearance of null subjects in clauses with the uninflected verbs. This section also discusses the appearance of the null argument in the matrix clauses, complex clauses, SVCs, and in clauses that involve topicalization.

4.2.1. Full Agreement *Pro*

One major characteristic of pro-drop in languages like Italian is the licensing of *pro* by means of rich agreement. That is, a verb agrees with a subject in all ϕ-features. Consider Italian in (1) again, as an example. The verb *parla* 'speak' has all the ϕ-features of the third pronominal *Lui* which licenses its omission.

(1) (Lui) *parl-a Italiano* (Roberts and Holmberg 2010:4)

He speak-3S Italian

'He speaks Italian'

In Maybrat, subjects are dropped under a similar condition. The verbs fully agree with the subjects in person, number, and gender features. The description of the distribution of null subjects shows that out of 2,993 occurences of subject arguments, 903 (30.17%) are null subjects that appear in clauses with full agreement (See Table 2). These pronouns include 1st, 2nd and 3rd singular person forms as shown in (2), (3), and (4).

(2) *pro t-efot ru m-ana ewok*

pro 1S-catch bird 3U-head two

'(I) caught two birds'

(3) *pro n-ari po ro t-awe a*

2S-hear thing REL 1S-say Q

'Did (you) hear what I say?'

(4) *pro y-asi y-sia rae m-siar*

3M-dance 3M-with men 3U-many

'(He) danced with many people'

(ECT: FT & ET – Fall 2020)

In these examples, the subjects are omitted for they have the matching ϕ-features with the verbs' inflection markers. The verbs: *t-efot* '2S-catch', *n-ari* '2S-hear', and *y-asi* '3S-dance' have the ϕ-features of the pronouns *tuo* 'I', *nuo* 'you', and *ait* 'he' which promote the omission of the full pronouns. Hence, like Italian in (1), sentences (2), (3), and (4) are grammatical without full subject forms. However, it should be noted that

unlike 1st and 2nd person pronouns, the third person pronouns in Maybrat, should be coreferential with the antecedents to have the full interpretations. For example, the subject *ait* 'he' in (4) can be dropped on the condition that it is coreferential with an entity mentioned previously or understood from the context. In contrast, the 1st and 2nd person pronouns have salient speech roles: speaker and hearer. So, they can be identified as they are without any antecedents. Siewierska (2004) mentions that third-person pronouns, unlike 1st and 2nd person pronouns, lack "extralinguistic context" and need to establish anaphoric relations. This is in accord with the typological fact that shows the asymmetry of agreement between 3rd person pronouns and the speaker-hearer related pronouns in many languages (e.g., Bhat 2004; Siewierska 2004; Lyons 1999).

In a similar vein, it would be infelicitous if a 3rd person pronoun as in (1) and (4) are expressed out of the blue, unless it is evident deictically to the hearer as shown in (5). (5) is a question-answer exchange between a father and a mother about what their son has been doing. Under generative grammar the relation between a 3rd person form and its antecedent is specified under Principle C of the Binding theory which assumes the nature of R-expression: the identification of a pronoun has to be free from a syntactic environment (Chomsky 1981). *Pro* in that sense should then refer to an entity outside the linguistic expression (i.e., sentence).

(5) Father: *pro y-kom p-awia?*
3S-write thing-who
'What does (he) write?'
Mother: *pro y-kom po ro* ***skola***.
3S-write thing REL **school**
'(He) writes a school project'. (NRT: RT- 04/21/2021)

The 1st and 2nd person pronouns and the 3rd masculine pronoun in Maybrat have full ϕ-features that are coded in the verbal agreement markers. It can be seen from these examples that the 1st, 2nd and 3rd person pronouns can be dropped freely. While the 1st and 2nd person null subjects have their features identified from the verbal markers, the 3rd person pronouns need to be coreferential with a linguistic or discourse antecedent. In that case, null subjects in (4) and (5) may be identified formally by the grammatical properties of agreement, but their definite referents should be identified by means of other entities in a given context. Apart from it, it can be said that null subjects that appear in these contexts are pronominal by the fact that their identities can be recovered by the agreement markers. The agreement morphemes have all pronominal features which enable them to function as pronominal without the presence of full subject forms as argued by some authors (e.g., Alexiadou & Anagnostopoulou 1998; Borer 1986).

So far, this section discusses pro-drop involving person pronouns with full ϕ-features. As a matter of fact, the 3rd person pronoun discussed in this context happens to be the 3rd masculine person form. The following section shows that there is an asymmetry of ϕ-features agreement between the 3rd singular masculine and the 3rd singular feminine pronouns regarding pro-drop in Maybrat.

4.2.2. Partial Agreement *Pro*

Unlike the 3rd person masculine pronoun, Maybrat verbal agreement does not specify ϕ-features of the third person pronoun *au* 'she.' Verbs inflected with such morphemes agree partially (i.e., only in the person feature). Despite this fact, it has been observed that such partial agreement does not prevent subjects to be dropped in many

sentential contexts. As shown in Table 2, null subjects appear 859 (28.70%) times in clauses with partial agreement out of 2,993 subject arguments. Take, for example, (6). The sentence is grammatical even though the higher clause appears without the subject. Besides, the verb is underspecified for agreement which should not allow null subjects in view of the rich agreement constraint.

(6) *pro*$_i$ *m*$_i$*-ahe ana*$_j$ *m*$_j$*-ama*

3U-see them 3U-come

'(she) saw them coming'

The null subject in (6) presents a sharp contrast of person feature identification with the rest of null subjects that appear in (2), (3), (4), and (5). This example highlights a feature mismatch in relation to agreement between the 1st and 2nd person forms and 3rd person forms. As demonstrated in Section 4.2.1, only the 3rd person pronoun with masculine gender can have full agreement. The 3rd singular feminine pronouns only establish partial agreement with the verbs. It can be assumed that with such agreement, not only that it needs an antecedent but an antecedent which satisfies all the necessary ϕ-features to achieve a full interpretation. In Sections 4.2.3 and 4.2.4, I show that having such a sentential antecedent is not enough to license the underspecified 3rd person *pro*. Sentence (6) is a striking example that may challenge the pro-drop parameters which seem to attribute pro-drop largely to rich agreement. This suggests that the third person null subject pronouns in Maybrat are not restricted by the agreement morphology.

With such ϕ-feature asymmetry, what follows is whether an underspecified 3rd person null subject pronoun in Maybrat is a *pro*(noun) or a variable. The example indicates that both morphology and discourse may contribute to the identification of the

null subject. I assume that the null subject is a *pro* or *pro*(nominal) variable for the following reasons. First, the underspecified marker has a definite feature of person (Lyons 1999) which identifies the person feature of the null subject. The missing features are the number and gender which need to be supplied by a discourse context/topic. Second, alternatively, its full ϕ-features can be identified when such *pro* is co-indexed with another NP in a matrix clause. Third, the full ϕ-features should be regarded as referent definiteness. In the sense of Holmberg (2005), referential pronouns in pro-drop languages like Italian are definite (i.e., DP) because they have full ϕ-features. Although I have suggested that *pro* in (6) is a pronominal, the null subject may not be definite or specific due to the partial ϕ-features.

Given that such null subjects may need to take a discourse topic to provide a specific or definite interpretation. It can be said that the subject *pro*'s (+pronominal) feature can be recovered by the inflectional head, but the other referential features have to be provided by a discourse topic (i.e., topic feature). Thus, I assume that such subject *pro* is both a pronominal and a variable (See Cinque 1990; Modesto 2000). The assumption is based on the fact that such *pro* has a pronominal feature that is also supplied by discourse which may not involve movement as topicalization does. Up to this point, it is important to raise the question: How rich is being rich in agreement to license a pro-drop? I will not pursue this question any longer but suggest further queries for the answer.

4.2.3. Subject *Pro* with Uninflected Verbs

Adding to the unspecified 3rd person null subject is the appearance of subject *pro* in clauses with the uninflected verb. Of 2,993 appearances of subjects, null subjects

appear 376 (12.56%) times. Verbs of this type cannot identify the content of a null subject if agreement morphology is considered. Take, for example, the verbs ø-*skoh* 'like' and ø-*hamit* 'bundle' in (7) and (8). The verbs are not inflected with ϕ-features (marked with the minuscules). So, they cannot perform any grammatical agreements with the subjects which fail to identify the content of the null subjects. In that sense, there should be other means which identify the features of the missing arguments. Otherwise, such sentences are unacceptable.

(7) *pro* ø-*skoh tawer aya*

ø-like fishing.with.rod water

'(I/you/we/they/she/he) like fishing'

(8) *pro*$_i$ ø-*hamit rako mnan pro*$_i$ *y*$_i$-*eu kampon*

ø-bundle fire.wood after.that 1S-return village

'(He) bundles firewood after that he goes back to village'

(ECT: FT, MT - 25/11/2021)

(7) and (8) indicate that the licensing condition for *pro* in the two sentences has to be beyond the linguistic context. Their contents need to be identified in relation to entities that have been established in the discourse. Otherwise, as Dol (2007) suggests, overt pronoun forms are used to avoid intelligibility problems. However, this is not always the case. The verb in the main clause of (8) may have the same arbitrary interpretation. It is coindexed with the verb in the adverbial clause that is inflected with the 3rd masculine person marker. This way makes the verb *y-eu* '3M-return' a potential referent which identifies or interprets the ϕ-features of *pro* in the higher clause. In contrast, the null

subject in (7) does not have either linguistic antecedent or grammatical agreement that identifies its content. It can be assumed that its interpretation is bound only to a discourse context. In other words, its interpretation is determined from a set of entities that is subject to a given context. Building on Principle C, the null subject may be an instance of a variable that is bound by A'-topic, following Chomsky's (1981) definition of a variable.

Some pro-drop languages show a slightly similar way of identification of *pro* in sentences like (8) in Maybrat. Consider the following example provided by Modesto (2008:380) for *pro* in Brazilian Portuguese (BP) complement clause.

(9) *O Feco$_1$ convenceu a Dani$_2$ que e$_{1/*2/*3}$ ganhou o Campeonato.*

The Feco convinced the Dani that won the championship

'Feco convinced Dani that he won championship'

Modesto noted that sentences like (9) can be expressed out of the blue since it is always coindexed with the matrix subject. The omitted embedded subject gets its interpretation from the matrix subject. In (9) *Feco* is coreferential with the empty subject as shown by the indexes. Since they are coindexed, the null subject can be identified and interpreted by being coreferential with the subject NP in the higher clause. This shows an opposite direction of coreference in the syntactic structure between BP and Maybrat. The identification of *pro* in BP is managed upward whereas that in Maybrat is downward. In BP, but not in Maybrat, the inflected verb of the second clause has the person marker that is coindexed with the subject of the previous clause. Nevertheless, I have shown that that lack of agreement does not restrict the subjects to be dropped. Taking (7) and (8) into account, Maybrat appears to be similar to languages like BP. However, Maybrat is

different from BP in terms of the asymmetry of the verbal morphology and how *pro* is identified. I pursue such contrast further in Chapter 6.

This section has shown a different angle of the asymmetry of the distribution and interpretation of *pro* in Maybrat. Despite the lack of verbal agreement morphology, the null subjects still appear in the constructions. The examples above provide two interpretations of the null subjects. It can be a variable that is bound by A'-topic as in (7), but a pronominal that is coreferential with or bound by the inflectional (agreement) head as in (8). In the following section, I show that a similar distribution and interpretation of null subjects in sentences like (8) is also found in some other complex clauses.

4.2.4. Subject *Pro* in Matrix Sentences

The omission of subjects in complex sentences is observed in matrix sentences with the following subordinate clauses: complement clause, adverbial clause, conditional clause and relative clause. One may argue that some of the clauses may require PRO. PRO is considered the subject of an infinitive clause. PRO is defined under the binding principles as an empty category with (*+pronoun, +anaphoric*) features. It has been argued to be ungoverned (Chomsky 1981; Hornstein, Nunes, Grohmann 2005). (10abc) illustrates PRO in English with different types of control verbs.

(10) a. Ali$_i$ wants PRO$_i$ to get the paper done

b. Ali$_i$ promised her$_j$ PRO$_i$ to come home early

c. Ali$_i$ told her$_j$ PRO$_j$ to get a cab

Example (10a) shows a matrix sentence with an infinitival clause. In this example, PRO is coreferential with or controlled by the matrix subject *Ali*. In (10b), the subject

controls the action embedded in the infinitive clause. (10b), unlike (10a), has an infinitival clause as the complement of the matrix verb and PRO is coreferential with the matrix subject. PRO in (10c) appears to show a different referential relation. It is coreferential with the object of the matrix clause and the object controls the entire infinitival clause. Thus far, these clauses have one thing in common. The matrix and infinitival clauses are related to each other (van Gelderen 2017:94) and the relation is maintained by co-indexation between PRO and the matrix NPs.

Now consider Maybrat sentences in (11) and (12).

(11) a. M*aria*$_i$ *ø-skoh pro*$_i$ *m-som bola* (ECT: MT- 06/23/2021)

Maria ø-like 3U-play soccer

"Maria likes to play soccer"

b. *Maria*$_i$ *m-awe* / pro$_i$ *m-fau pitis m-ae eyu* (ECT: MT- 06/23/2021)

Maria 3U-say 3U-put money 3U-at bag

'Maria$_i$ said that (she$_i$) put money in the bag'

(12) a. *Izak*$_i$ *y-ekias ait*$_j$ *pro*$_i$ *ø-fnak ru sau* (ECT: ET- 06/03/2021)

Izak 3M-tell 3M ø-shoot bird one

'Izak$_i$ asked him$_j$ to shoot a bird'

b. *Izak*$_i$ *y-ekias y-awe* pro$_i$ *y-ame krau sau* (ECT: ET- 06/03/2021)

Izak 3M-tell 3M-say 3M-stab bandicoot one

'Izak$_i$ said that (he$_i$) killed one bandicoot'

These examples illustrate a common sentence structure in Maybrat that is formed by Serial Verb Constructions. It has widely been observed that verb serialization is used in many languages in Africa, Asian, and Pacific Regions, and Central America as a syntactic mechanism to mark coordination and subordination (e.g., Aikhenvald 2006;

Bisang 2009). Maybrat is one such language. However, the way Maybrat SVCs display syntactic functions is not straightforward. The syntactic functions can be displayed successfully if appropriate intonation contours are applied. I leave the discussion of intonation contours later and assume now that (11) and (12) express subordination. Thus, (11a) and (12a) are the matrix sentences with control NPs whereas (11b) and (12b) are clauses that serve complementation. Superficially, (11a) and (12b) function similarly to English control clauses in (10) since the second verbs function as infinitival clauses. This may suggest that PRO appears in the structures.

As a matter of fact, Maybrat does not have non-finite, but finite verb forms. There are two morphosyntactic facts regarding the finiteness of the verbs. First, most of the verbs are inflected with person markers. Although some are uninflected verbs, they too have syntactic distributions that are identical to the inflected verbs thereby they can be the matrix or subordinate verbs. Second, subjects are dropped freely regardless of the morphological form of the verbs. Dol (2007) observes that the uninflected verbs actually have the same person markers, but they are repressed by certain morphophonological constraints (See Chapter 2 for the discussion). Building on these facts, I suggest that PRO cannot be assumed to appear in the infinitival clauses like (11a) and (12a) in Maybrat. Given that all verbs are finite, it can be assumed that only *pro* appear in the subject positions of all clause types.

Accordingly, all examples shown above have subject *pros* which are the subjects of the embedded clauses. The SVC in (11a) expresses the infinitival function where the second verb performs nominal or gerundive function. This clause takes *pro* as the subject. As can be seen from the translation the whole infinitival complement appears to be the

object of the first verb. In (12a) the verb *y-ekias* 'tell' is a control verb which requires an overt object. The object also appears to be the subject of the second verb which is a typical control structure at least in languages like English. *pro* in this context appears to be the subject of the embedded clause.

Similarly, sentences (11b) and (12b) have *pros* which appear in the subject positions of the second verb and third verb. These null subjects are coreferential with the matrix subjects. It should be noted that another *pro* can appear before the second verb of (12b) in view of (12a) discussed previously. Yet, such matrix object *pro* cannot be the subject of the embedded clause as in (12a) since the embedded *pro* as in (12b) appears to be coindexed with the matrix subject.

Some of the language consultants commented that sentences like (11b) or (12b) can have two interpretations in relation to the agents (realized or unrealized). When the embedded subject is omitted, *pro* should be coreferential with the matrix subject. If the embedded null *pro* is to refer to the matrix object, the object should be realized phonologically as in (12a). The informants suggested that it has to do with the types of verbs that are used. In these contexts, the telling verb *y-ekias* '3S-tell' is dealt with. In Section 4.5, I provide more examples of null subjects that appear in matrix sentences with the telling verb ø-*sokuos* or ø-*tepies* 'order' which also requires overt realization of matrix objects.

In addition to pro-drop in complement clauses, null subjects are also found in sentences with adverbial clauses, conditional clauses, and relative clauses. The following examples illustrate null subjects that appear in a temporal adverbial clause (13), a conditional clause (14), and a relative clause (15).

(13) pro$_i$ ø-*saruk* *po* *mati* pro$_i$ *y$_i$-ari* *muniah* *m-atu*

ø-cook thing and.then 3U-hear rifle 3U-explode

'(He$_i$) was cooking something when (he$_i$) heard the shooting'

(14) *Fire* pro$_{i/j}$ *ø-skoh* pro pro$_{i/j}$ *m-ama*

If ø-like 3U-come

'If (she$_i$/they$_j$) like (it), (she$_i$/they$_j$) can come'

(15) *Aof* *ro* pro$_i$ *y-efat* *re-t-o* *m-awe* *m-ai* *metah$_j$*

Sago REL 3S-cut.down LOCATION-near-U 3U-fall 3M-hit dog

r-ait pro$_j$ *m-atiet*.

POSS-3M 3U-perish

'The sago tree that (he) cut down hit his dog and (it) died'

(ECT: MT & ET- 08/24/2021)

Examples (13) and (14) display null subjects that are distributed in both the matrix and subordinate clauses. The structures of the two sentences are identical in that they both have the uninflected verbs in one of the clauses: ø-*saruk* 'cook' in (13) and ø-*skoh* 'like' in (14). Sentences (13) and (14) display *pro* with the uninflected verbs in that *pro* can still be identified regardless of the lack of verbal agreement. The null subjects as in (13) and (14) are interpreted by their coreferential with the person-inflected verbs in the next clauses down. However, unlike (13), the subject *pro* in (14) cannot have the full interpretation in the similar way. Even though the second verb can be assumed to match the person referential features of the null subject, it has the underspecified agreement. Since the null subject in (14) appears with the same distribution as that in (6), I continue

to assume that such *pro* is a pronominal variable. Although it has the pronominal feature marked on the verb, it needs to be coreferential with a discourse topic to gain the full interpretation.

Sentence (15) is different from (13) and (14) since *pro* appears in two environments. The first *pro* appears within a relative clause that forms the complex subject of the causative clause. This *pro* is coindexed with the head of the relative clause *aof* 'sago.' In languages like English, such appearance is prohibited as seen (16b). The overt pronoun has to be used to rescue the grammaticality of the sentence. The second *pro* appears in a serial verb construction. Unlike *pro* that appears in the relative clause, this null subject is underspecified due to the partial agreement with the stative verb *m-atiet* '3U-perish'. However, it can be assumed that the ϕ-features of the null subject can be identified successfully by the presence of the NP *metah* 'dog' that is coindexed with the null subject.

(16) a. The car that I bought is broken

b. *The car that *pro* bought is broken

4.2.5. Topic and Subject *Pro*

Some scholars have proposed that there is a relationship between the presence of topic and null subjects (e.g., Givon 1983; Huang 1984; Frascarelli 2007; Modesto 2008; Samek-Lodovici 1996). In the sense of Lambrecht (1994:128), the null subjects can be assumed as the *topic expressions* of a *topic referent*. In that sense, I assume that a null subject may be the representation of a topic. What follows is that the null arguments may be adequately understood as null topics.

Building on this conception, this section puts forward sentence topics in Maybrat. By a firm definition, a sentence topic is what a sentence is about. It is normally associated with NPs in subject positions followed by comments as predicates (Lambrecht 1994; Neeleman & Vermeulen 2012; Reinhart 1982). Having such a definition would distinguish sentence topic from topic as a unit of discourse, which is the primary concern of Givón (1983). What I will be focusing on in this section is a topic that is located outside a sentence boundary (A'-position) which is commonly referred to as left-dislocation or hanging topic. Much of this can be seen in English sentences like *that guy$_i$, I hate him$_i$* (van Gelderen, 2013:173) or *John$_i$, he$_i$ was seen by Mary* (Neeleman & Vermeulen 2012:17). This kind of topic can be based-generated in A'-position. Besides, a topic can have a resumptive pronoun that is coindexed with it as seen from the English example. In the case of pro-drop languages these pronouns have been assumed to be unexpressed and the co-indexation occurs at LF. This section mainly focuses on sentence topic which situates at the left periphery of a sentence. Later, I show that in certain contexts once a topic is established it can be maintained through *pro*.

Topic left-dislocation is a common information packaging in Maybrat. This is especially seen when an object of a transitive verb is fronted for prominence (Dol 2007). I assume that topics can be base-generated at the left periphery of the sentences. They are situated outside a sentence domain and are coindexed with the null subjects. I also assume that the null subjects are resumptive pronouns which are realized to increase intelligibility. The presence of a resumptive pronoun has been viewed as an indication

that a topic construction does not involve movement (van Gelderen 2013; Miyagawa 2017b). Rodman (1997) notes that there is no need to construct a topic by movement if it has been established. The topic construction under this framework can be seen in (17) and (18).

(17) *Lukas$_i$ f-o / pro$_i$ y-amo ora poknu* (ECT: FT-Fall 2020)
Lukas very.near-U 3M-go garden morning
'This Lukas, (he) goes to garden in the morning'

(18) *Metah re-t-o / pro$_i$ m-hoh m-amo ee* (ECT: YW-Fall 2020)
dog Loc-near-U 3U-run 3U-go far
'That dog, (it) ran away'

As seen from the examples, the proper name *Lukas* in (17) is followed by the simplified demonstrative form *f-o* (See Dol 2007:98). In (18), another demonstrative, *re-t-o* 'Loc-near-U' follows the NP *metah* 'dog'. These NPs serve as the topics of the two sentences. The topic NPs are in the position outside the sentences or in A'-position (non-argument positions). It is necessary to note that the speakers would place an intonation break/pause after the topic expressions indicated by the slashes. The intonation break in each sentence marks the boundary between the NPs in A'-position and those in A-position. *Pro* appears as the covert subject of the verb *y-amo* in (17) and the serial verb *m-hoh* 'run' and *m-amo* 'go' in (18). They are also coindexed with the topic NPs. Thus, although *pro* in (18) appears in a clause with the underspecified agreement, the topic NP provides the full interpretation. The topic NP in (18) is, in fact, cannot be resumed by a pronoun because Maybrat lacks pronouns with (*+animate, –human*) features. Some of the language consultants suggested that the pronoun *au* 'she' can be used, but it is not very

common. So, *pro,* but not overt pronouns, seems to be obligatorily present in the subject position of a topicalized sentence like (18).

Another similar topic construction is found when a DP is a full-fledged masculine or feminine noun that is modified by an adverbial. Take for example sentence (19) that takes a complex NP as the topic. The NP *rae mapi* is modified by the possessive pronoun *r-anu* followed by the adverbial *tiaen* 'formerly.' It can be said that the presence of the possessive form and the temporal adverb indicates a specific person and time. With an appropriate intonation break before the verb *m-enot*, it can be assumed that the complex NP is not the argument of the verb. Thus, *pro* is potentially the subject of the main clauses headed by the verb *m-enot* and the subordinate clause headed by the verb *m-ekias*.

(19) *rae$_i$ m-api r-anu / tiaen* pro$_i$ *m-not po rai* pro$_i$ *m-ekias*

men 3U-old POSS-3P formerly 3U-think thing enough 3U-tell

'People of the past, (they) think about something before (they) talk'

(NRT: LT-05/18/2021)

Now, consider (20) that shows a series of verbs without subjects. It indicates that the appearance of the null subjects is initiated by a topic NP that has been introduced in the beginning of the text. (20) is an excerpt of a story about food processing in the past. The following example shows the speaker omitting the subjects of a series of clauses.

(20) *Orie t-eme$_i$ ana$_i$ po-knu m-amo tipuo*

later 1S-mother they NOM-dark 3U-go immediately

pro$_i$ *m-atu awiah$_j$* / pro$_i$ *m-ama m-ese / po-knu /*

3U-pull.out taro 3U-come 3U-place NOM-dark

pro$_i$ *m-eros* *m-aim* pro *m-wau* *m-nan* pro$_j$ *samer*

3U-stand.up 3U-roast 3U-cook.with.leaves 3U-then *ø*-done

(Lit.) "Later, my mother, they, in the morning go immediately to pull out taro and come and store (them). In the morning, (they) cook (them). (they) cook and bury (them) in hot fire ash until (they) are done.

(NRT: LT- 05/18/2021)

In (20), the speaker introduces the actor of the events (i.e., *t-eme ana* '1S-mother they') in the first line of the text. The possessive form *t-eme* is merged with the free pronoun *ana* to form a complex NP which literally means 'my mother they.' The NP seems to construct pronouns that stand in apposition. In fact, the double pronoun *ana* 'they' functions as modifying the main NP *t-eme* 'my mother' to denote definite and specific reference. As the same NP is reintroduced to the following clauses, it is repressed phonologically. This example carries a different structure of topic and subject compared to that of sentence (19ab) above. A topic is introduced in the beginning of the discourse and carried on throughout the discourse. The compound NP *t-eme ana* "1S-mother they" is the topic that is established in the first sentence and omitted in the subsequent clauses.

According to Frascarelli (2007), this kind of topic construction represents a topic chain formation. Frascarelli mentions that the presence of a *pro* indicates that it is linked to the topic presented earlier in the discourse. The author notes that topic continuity is the progression from Aboutness topic to Familiar topic. It can be assumed that a *pro* in a continuous speech marks such a topic continuation. Frascarelli (2007:703) shows this in the following Italian example.

(21) ***[il mio capo]***$_i$ *come diceva Carlo [...]* ***pro***$_i$ *è un exreporter [...]* ***pro***$_i$ *è stato in giro per il mondo […]* ***pro***$_i$ *mi ha preso in simpatia solo che siccome* ***pro***$_i$ *è mostruosamente lunatico, è capace che domani non* ***gli***$_i$ *sto più simpatico e* ***pro***$_i$ *mi sbatte fuori [...] comunque a parte questo* ***pro***$_i$ *mi deverte moltissimo – poi c'è* ***M.F.***$_k$ *che è quest che appunto sta facendo tipo praticantato per poi andare a fare l'esame da giornalista/ fra un anno e mezzo quindi* ***lui***$_k$ *c'ha quanto meno la garanzia che* ***pro***$_k$ *può rimanere lì finché* ***pro***$_k$ *non farà l'esame cioè ehm* ***lui***$_i$ *poi glid eve fare/ scrivere le referenze ...*
'[**my boss**]$_i$ as Carlo used to say [...] **pro**$_i$ is a former reporter [...] **pro**$_i$ has been all over the world [...] **pro**$_i$ likes me, however, as **pro**$_i$ fires me […] anyway, apart from this, **pro**$_i$ is really funny – then there is **M.F.**$_k$ who is practicing for his exam as a journalist/ in one and a half years, so at least **he**$_k$ has a guarantee that **pro**$_k$ will stay there till **pro**$_k$ has made the exam because **he**$_i$ then must make/ write a report …'

What I have discussed so far reveals two types of topic constructions. First, the subject is a sentential topic that is introduced in the previous sentence. The topic-subject is carried on through the unrealized topic expressions (i.e., *pro*) for the successive clauses. Lambrecht (1994:132) mentions that many languages (mostly SVOs) have "unmarked topic" that is introduced and maintained into sentences through "unaccented pronouns" which I have assumed to be *pro*. Second, the subject is a discourse topic that shapes the theme of the discourse. Once it is introduced in the beginning of a discourse, it can be reintroduced and identified throughout the subsequent clauses through grammatical person markings (Givón 1983:30).

Taken together, *pro* as in (19) is a topic-subject that is omitted for having a referent established in the beginning of the sentence or discourse. However, *pro* in (20) shows a different side of a topic continuity. The subsequent *pros* are coindexed with the NP that is presented overtly in the beginning of the text. It is necessary to note that, unlike languages like Japanese, Maybrat lacks overt grammatical marking for topicality

(e.g., topic particle or clitic) but it has an asymmetry in its verbal morphology. So, intonation marking should be taken into consideration when dealing with *pro* in that sense. Such intonation marking is as crucial as determining the functions and meanings of SVCs.

The issue of topic and subject and its relation to whether *pro* is present or not in a sentence may raise a question. Is the person agreement morpheme, on itself, a pronominal argument? This issue has been a subject of debate since Jelinek (1984) introduced Pronominal Argument Hypothesis (PAH). Jelinek argued that verbal pronominal markers in languages like Navajo function as arguments. It can be said that a verb in these languages is a clause on itself since the pronominal marker acts as the subject/argument (See Borer 1986 or Alexiadou & Anagnostopoulou 1998 for a similar claim). In turn, the subject position may not be projected in languages embracing PAH. It seems that PAH is readily adopted into Maybrat, since a verb in Maybrat can appear independently as a clause (Dol 2007). If so, the first NPs in (17), (18), or (19) may retain their functions as sentential topics that are situated at the left periphery of the sentences. Subsequently, *pro* may or may not be present syntactically.

It brings two approaches for determining whether a subject is itself a topic or not. On the one hand, a *pro* is present syntactically in the subject position if the verbal person marker as in (17) is construed as an agreement marker. The verb agrees in ϕ-features with *pro*. On the other hand, if the person marker is taken as an argument of the verb, *pro* is absent syntactically. Dol (2007) considers the pronominal markers subjects which is in conformity with PAH. I consider the person markers as agreement markers for two reasons. First, PAH has been discussed in relation to either polysynthetic or non-

configurational languages that incorporate pronominals (Baker 2003). Maybrat is an agglutinative language. Second, there has been no consensus among scholars for whether a pronominal marker is an agreement marker, an argument, or a subject of a clause (Corbett 2006; Siewierska 2004). Nevertheless, I assume that this can be pursued further if more language data are brought forward which I will not discuss further.

4.2.6. Summary

To sum up, the types and distribution of null subjects in Maybrat are varied. They appear in different kinds of sentential contexts. In general, the null subjects appear in three contexts. They appear with the verbs that show a full, partial, or no agreement at all. They are also found in different types of sentences which include simple clauses, matrix clauses, and complex clauses. The null subjects that appear in full agreement include the 1st and 2nd person pronouns as well as the 3rd singular masculine pronouns. The third 3rd singular feminine null pronoun shares the underspecified features with the other third person forms including the 3rd person plural pronouns and other kinds of NPs. It has been shown so far that these discrepancies do not prevent the appearance of the null subjects. Nevertheless, the asymmetry seems to affect the interpretation of the null subjects. The referents of the 1st and 2nd person as well as the 3rd singular masculine person null subjects can be identified fully by the verbal agreement markers. In contrast, the null subjects with the 3rd singular feminine features and other kinds of NPs have indefinite interpretations. When null subjects appear with the uninflected verbs or those with partial agreement,

they can be interpreted as either pronouns or variables, even pronominal variables. All in all, the verbal morphological types may play a major role in the interpretations in this regard.

4.3. Null Objects

Unlike the null subjects, null objects in Maybrat cannot be identified by means of verbal agreement because Maybrat lacks object-verb agreement. The objects are dropped almost as freely as null subjects. Of the 64.03% occurrence of null arguments, 18.06% are null objects (See Table 1). Although the data may suggest that the null subjects appear more frequently than the null objects, they indicate that the appearance of null objects in Maybrat is obvious.

To illustrate the appearance of the null objects, consider (21) in comparison to (22) in English which is ungrammatical if the object is dropped.

(22) *Beni$_i$ y-ahe* pro$_{i*j}$ *oah*

Beni 1P-see already

'Beni already saw (her/him/them/it)'

(23) Beni$_i$ saw him$_{i*j}$ already (ECT: MT – 10/15/2021)

Like the projection of NP in the structural subject position, the object position of a transitive verb in English must be filled with an overt NP form to satisfy the Projection Principle (PP). Both English and Maybrat do not have object-verb agreement, but only Maybrat allows *pro* in object positions which is contrary to the rich agreement hypotheses. As shown in (22) the verb *y-ahe* agrees with the subject but not with the object. It may indicate that discourse context plays a significant role in the dropping and

identification of the object in (22). This is predictable since (22) can be produced out of the blue if the referent has been established or understood from the context. In that sense, null objects in Maybrat are bound by A'-topic for their identification.

In the following sections, I present data on the types and distribution of the null objects as observed in some contexts of sentences. It generally covers the null objects found in the simple and complex sentences. The appearance of null objects in the complex sentences also includes the serial verb constructions and continuous speech.

4.3.1. Object *Pro* in Simple Sentences

The following example is another object *pro* that is found in a question-answer exchange.

(24) Speaker A: pro *n-ahar* *ait*$_i$ *fe* *a?*
2S-know 3M NEG Q
Do you know him?
Speaker B: *tuo* *t-ahar* *pro*$_i$
1S 1S-know
'I know him' (ECT: FT-Fall 2020)

Example (24) shows that the null object that appears in Speaker B's response is coindexed with the pronoun *ait* introduced by Speaker A. Speaker B's response is acceptable provided that the previous discourse has been established. Since there is no object agreement, discourse context/topic is the only means for the identification of null objects in this respect.

The interpretation of null objects that is bound to a discourse context has been the main characteristic of pro-drop in non-agreement languages such as Chinese, Japanese,

and Korean. Huang (1984) illustrates this in the following example in Chinese. The example shown here only includes the question and response (7c) (from Huang 1984:533) for its relevance to this section, represented here as (25). It can be seen from (25) that Chinese has the same distribution and interpretation of null objects as Maybrat. Speaker B seems to omit the direct object because it is coreferential with the NP *Lisi* mentioned by Speaker A previously.

(25) Speaker A: Zhangsan kanjian Lisi le ma?
Zhangsan see Lisi LE Q
Speaker B: ta kanjian *e* le
'he saw [him].'

According to Huang (1984:542) the null object has to be interpreted as a variable that is bound by an empty topic in A'-position. Principle C of Binding Theory defines variable as an empty category whose interpretation is free from a local binding relation. According to Huang, the object has undergone a movement at LF to the topic position which puts it as an operator that binds the empty object position. Given that, *Lisi* is the null topic in A'-position that binds the null object in A-position. As such, the binding relation provides the interpretation of the object *pro* as a variable.

Building on this conception, the null object in (24) should be considered a variable. It is bound by the discourse topic which may appear as a null topic at the left periphery of Speaker B's utterance. If there is no such binding, the null object is free to be coreferential with any entities outside the sentence that promotes indefinite referents or arbitrary interpretation. A clause with an indefinite null object may not be acceptable in this context. Empirically, Speaker B would use the full object form to recover the

context/topic. In other words, the previous topic would have been so accessible to Speaker B that the object could be omitted.

4.3.2. Controlled Object *Pro*

A controlled structure involves a subject or an object that controls (i.e., the actor) two events, one in the control clause and the other in the embedded one (Hornstein, Nunes, and Grohmann 2005). It has been shown in Section 4.2.4 that it may involve the subject that controls the events. As for objects, it is the actor that controls the two interrelated events. This is illustrated in the following English structure (26). The pronoun *him* is the object of the matrix clause (i.e., theme) that is also the subject of the event in the non-finite complement clause.

(26) a. I expect him [PRO_i to come early]

b. John forced me_i [PRO_i to be home soon]

Maybrat control structure normally involves the telling verbs *ø-sokuos* 'order', *m-ekias* 'tell', *t-pies* 'order' or *m-awe* 'say.' Superficially, Maybrat does not allow a matrix object position to be unrealized phonetically when it is preceded by these verbs, except for the verb *m-awe* 'say.' Take, for example (27a). The verb *m-ekias* requires the object to be overtly present. Otherwise, it is ungrammatical.

(27) a. *$Lisa_i$ m-ekias ait_j/pro* y-fot $kokok_k$ m-aku*

Lisa 3U-tell 3M 3S-catch chicken 3U-child

'Lisa told him to catch the chick'

b. *Lisa$_i$ ø-sokuos pro m-awe pro$_i$ y-fot kokok maku*

ø-order 3U-say 3S-catch chicken 3U-child

'Lisa told (him) that (he) caught the chick' (Lit. Lisa told him she said to catch the chick) (ECT: MT-08/23/2021)

In fact, (27a) can still be grammatical with a different interpretation when the telling verb *-awe* 'say' is inserted as seen in (27b). (27b) is construed as having an implicit object. Thus, the verbs *mekias* and *mawe* have to be assumed to have an argument slot individually, in view of the Projection Principle. With this in mind, (27b) is a grammatical sentence that still retains the underlying syntactic representation of (27a) with an implicit object argument in the SVC. The embedded object is null once it is coreferential with the referent of the previously mentioned entity which is identical to the conditions for Chinese object *pro* in (25). It is necessary to note, in relation to (27ab), that the syntactic mechanism can only be speculated under a serial verb construction that may not be available in many pro-drop languages discussed in the literature.

So far, I have shown that *pro* in matrix object position is very restricted. In most cases, Maybrat shares the projection of matrix objects in languages like English in terms of the phonological realization of matrix objects. The contexts where a matrix verb can allow its direct object to be null is observed in the serial verb constructions. In the section that follows, I provide data of object pro-drop in other subordinate clauses and show that under certain circumstances an object pro may not be considered variable.

4.3.3. Object *Pro* in Subordinate Clauses

Previously, I have assumed that the null objects in Maybrat as in (24) can be viewed as a variable that is bound by a null topic. In this section,
I show that a null object in Maybrat can be a pronoun for reasons that I will elaborate later. Consider (28), a sentence with a conditional clause headed by the manner adverbial *fire* which is adequately translated as the English conditional marker *if*.

(28) *fi-re* *au*$_i$ *ø-skoh* *ø-farkor* / *pro*$_j$ *p-emo* *p-etu* pro$_i$ *m-ama*
similar.to-PART 3U ø-like ø-learn / 3P-go 3P-call 3U-come
"If she$_i$ likes to go to school, (we$_j$) call (her$_i$) to come."
(ECT: FT-Fall 2020)

Sentence (28) has two serial verb constructions. The first (*ø-skoh* 'like' and *ø-farkor* 'learn') is a sequence of uninflected verbs which appears to form an infinitival structure. The second construction (*p-emo* 'go' and *p-etu* 'call') forms a sequence of verbs with the inflected person prefixes which comprises a single event of calling somebody. *Pro* in question is the one that appears as the object of the second string *pemo-petu*.

There are two kinds of evidence that suggest that the null object is an instance of *pro*(nominal). First, as seen by the indexes, the null object is coreferential with the object pronoun *au* 'she' in the previous clause. The object *pro* takes the object of the immediate higher clause as its antecedent. In Binding Theory, this may be taken broadly as confirming Principle B which states that a pronoun should be free from a local binding (i.e., clause binding). The second evidence is related to the null object which may appear

in between the string *p-etu* and *m-ama*. Notice that the SVC seems to form a control clause in which the verb *p-etu* takes *pro* as its object and it appears to be the subject of the verb *m-ama* at the same time. Since the object is also the actor of the event *m-ama* 'come', it can be assumed that it agrees with the object *pro* in the 3rd person feature as seen in the glossing. This explains that the object *pro* has the specific interpretation that is managed by the indirect partial agreement with the verb *m-ama*. It is also conditioned by being coreferential with the full pronoun *au* 'she' in the previous clause.

Next to *pro* as in (28) are null objects that appear in adverbial clauses. Adverbial clauses serve the role of an adverbial to a verb. It basically "provides information on how, where, when, and why the action or event took place" (van Gelderen, 2013:56). One of the markers of an adverbial clause in Maybrat is the form *mati* 'and.then' which denotes a sequence of events as exemplified in (29).

(29) *Linda$_i$ saso sasu mata$_j$ mati pro$_i$ saruk pro$_j$*

Linda ø-find cassava leaf end.then ø-cook

'Linda gathers cassava leaves then (she) cook (them)'

(ECT: MT-10/19/2021)

In (29), the object *pro* appears after the verb ø-*saruk* 'cook' which is uninflected. In this context, it may be impossible to identify *pro* from the verbal morphology. However, there is a semantic relation between gathering the cassava leaves and cooking. The verb ø-*saruk* 'cook' indicates the cassava leaves mentioned previously. Cassava leaf is one of the regular diets of Maybrat community. Given that, the null object is coreferential with the NP cassava leaf which gives the object *pro* its meaning. In other words, the presence of an NP in a higher clause provides the interpretation of the *pro*. It

can also be assumed that context contributes to the same interpretation in this respect. In view of Principle B of the binding theory, the null objects are free from the local binding relation. Thus, I assume that the interpretation of *pro* as in (28) may be similar to *pro* in an embedded clause that takes a matrix subject or object as its antecedent.

4.3.4. Topic and Object *Pro*

The relationship between an object and a topic may be more common in terms of topic construction than a subject in Maybrat. According to Lambrecht (1994:183) speakers usually indicate or emphasize which is a topic referent from a set of NPs by left-detachment which the author refers to as a *contrastive topic*. In Maybrat, as Dol (2007) observed, topicalization (i.e., fronting of an object) is very common and it is motivated by the need to establish a shift from one topic to another topic. I assume that an object-topic can also be based-generated at A'-position or resulted from a movement (i.e., topicalization). By based-generation, I consider it to be referring to an established topic in which it is not necessary for fronting an object for the same purpose as Rodman (1997) suggested. Hence, I assume that once a topic is established in the previous sentences or discourse, the topic can be reintroduced to the left-periphery of the consecutive sentences. This appears to be in line with Frascarelli and Hinterhölzl (2007) who suggest that an Aboutness topic can be reintroduced as a new topic (i.e., topic continuity *à la* Givón's 1983). Consider the following example to illustrate the framework.

(30) *Orie t-eme ana poknu m-amo tipuo m-atu awiah*$_i$
later 1S-mother they morning 3U-go immediately 3U-pull.out taro
pro *m-ama m-ese* pro$_i$ / *poknu m-eros m-aim pro*$_i$ /
3U-come 3U-place morning 3U-stand.up 3U-cook

(Awiah fo), *pro m-wau* *pro$_i$* *m-nan* *pro$_i$* *ø-samer*

Taro Loc.near-U 3U-roast and.then ø-done

(NRT: LT- 05/18/2021)

'Later, my mother would go directly in the morning to dig out taros. Then (she) came and placed (them). In the morning, (she) got up and roasted (them). Then (she) cooked them in ash and then (they) were done.'

In (30), the first sentence presents the topic *awiah* 'taro' which is the direct object of the verb *matu* 'pull out.' When it is reintroduced into the subsequent clauses, the object is omitted. Since the events are around the same object (topic) *awiah* 'taro', the subsequent direct objects of the verbs are omitted. The subsequent object *pros* are formally coreferential with the object-topic as seen from the indexes.

I put this framework further within the *Aboutness* and *Familiar* topic framework of Frascarelli and Hinterhölzl (2007). (30) shows that the topic being introduced is an Aboutness topic (i.e., what the sentence is about). The topic becomes familiar in the subsequent clauses. As such, it is repeated throughout the discourse marked by the omission of the objects of the subsequent transitive verbs. In many contexts, the topic can be reintroduced as a lexical NP as illustrated in the second sentence. Thus, it can be assumed that it is base-generated there as a null topic and followed by the *pros* (null objects) that are coindexed with it. The omission of a series of the direct objects marks the topic continuity. What is seen as a series of object drops here can be assumed as a series of familiar topic drops. Following Huang (1984), the null objects are bound by a null topic that appears at the left periphery of each verbal clause. As such, the null objects can be interpreted as variables bound by the previous topic in the sense of Chomsky's (1981) variable definition.

The second type of topic construction in Maybrat is resulted from object fronting or topicalization. An object is moved from its base-generated A-position to A'-position, which I assume with Dol (2007:148) to direct one's attention to another topic. Consider the following examples.

(31) *Pi Kaspar*$_i$ / *rae m-ai* pro$_i$ *y-atiet*

man Kaspar man 3U-hit 3S-perish

"Mr. Kaspar, people beat (him) badly" (ECT: MT-08/28/2021)

(32) *Ita re-t-o*$_i$ / *fnia m-ama m-ese pro*$_i$

leaf LOC-near-U women 3U-come 3U-put

'[the] leaves, [the] women put' (NRT: MW-05/21/2021)

In (31), the NP *Pi Kaspar* 'Mr. Kaspar' is the topic of the sentence that is coreferential with the object *pro*. The object *pro* appears in a serial verb construction *m-ai* 'hit' and *y-atiet* 'perish' that constructs a causative construction. The interpretation of the object *pro* is similar to that of (28) in that the object *pro* agrees with the second verb indirectly. In addition, if the object *pro* is realized phonologically, it would function as a resumptive pronoun. In the same sense, the object *pro* can be the resumptive pronoun that is coreferential with the topic. Different from (31), the resumptive form may not be applied for *pro* as in (32). I assume it is because Maybrat does not have an equivalent pronoun for nouns with inanimate features). Under GB theory, if an object movement (i.e., topicalization) is assumed, the movement would leave an empty trace. Hence, *pro* as

in (31) or (32) is an empty trace that has to be coindexed with the topic. It can be said that the topic binds the empty object position which, under Principle C, is an instance of a variable.

In fact, in certain contexts such as island structures, a similar empty element in object position may not be considered a variable as Cinque (1990) argues. This is shown by Modesto (2000) in Brazilian Portuguese. According to Modesto, an empty object position in an island structure may not be considered a variable resulting from a movement. The null object should be assumed as an independent occurrence bound by other mechanisms. The author shows this by comparing null objects that appear in the island constructions between European Portuguese and Brazilian Portuguese shown in (33a) and (33b) respectively (from Modesto 2000:218, 220). As seen from the examples, the latter allows object *pro* to appear in an island construction whereas the former does not.

(33) a. **Eu informei à policia da possibilidade de o Manel ter guardado ec no cofre*

'I informed the police of the possibility that manel had kept (it) in the safe.'

b. *Eu informei à policia da possibilidade do Manuel ter guardado ec no cofre*.

'I informed the police of the possibility that Manuel had kept (it) in the safe.'

The appearance of a null object in an island construction, as in BP, is also observed in Maybrat. Consider the following sentences.

(34) *t-awe peris ana Sadrak y-suof* pro *m-ae amah ro-n-o.*
1S-say police 3P Sadrak 3S-steal 3U-at house Loc-far-U
'I informed the police (that) Sadrak stole (it) from the house.'
(ECT: FT & FT – 11/23/2021)

ku r-anu n-epe t-o n-kias po m-kah
Child POSS-3P 2S-give.birth Loc.near-U 2S-tell thing 3U-with
mai r-anu trus trus m-ahar
sound POSS-2P continue continue 3U-know
'Your child (incl) who you raise you tell things in our language consistently so later they know (it).'
(NRT: LT- 05/18/2021)

The examples show that *pro* appears in the complement clause in (34a) and in the adverbial clause in (34b). I assume with Modesto (2000) that the appearance of object *pro* in this particular context is an instance of pronominal. However, it is important to note that it is restricted only to island constructions. It can be said that the object *pro* that appears in the non-island constructions in Maybrat may be more of a variable as in (31) and (32) rather than a pronominal due to a strict A'-binding relation.

4.3.5. Object *Pro* in Elliptical Constructions

Some authors have argued that certain null objects should be treated as argument ellipsis (e.g., Kim 1999; Saito 2007; Hoji 1998; Takahashi 2008, Han et al. 2020, among others). According to these authors, what seems to be VP ellipsis in languages like English is not observed in most East Asian languages for two reasons. First, the elided element is not the whole VP but the object argument. Second, the elided object argument

normally has a sloppy reading. The second reason has been a common argument for distinguishing an argument ellipsis from the canonical object pro-drop, considering the languages the authors discuss are mostly non-agreement languages.

Consider the following sentences provided by Sato (2015:60) as examples of argument ellipsis in Japanese.

(35) (a) Taro-wa zibun-o tegami-o suteta
Taro-NOM self-GEN letter-ACC discarded
'Lit. Taro discarded self's letter.'

(b) Hanako-mo *e* suteta (^{OK} strict; ^{OK} sloppy)
Hanako-also e discarded
'Lit. Hanako also discarded *e*

(c) Hanako-mo sore-o suteta (^{OK} strict; * Sloppy)
Hanako-also 3SG-ACC discarded
'Hanako also discarded it'

According to the author, (35b) can mean *Hanako discarded Taro's letter* or *Hanako's own letter*. This interpretation is obtained in the case when the object is missing but not when it is overt, and it always receives a strict reading. Besides, it is not the entire VP that is missing but the internal argument that is selected to be omitted.

Like Chinese and the subsequent East Asian languages, Maybrat verbs lack morphological agreement for objects. Under this condition, a null pronominal in object position can receive a sloppy interpretation as well. The following sentences are from the elicitation tasks which were presented to three different Maybrat speakers for their judgements.

(36) a. *Mesak ø-peyak wanefuk r-ait.*

Mesak ø-throw.away cloth POSS-3M

b. *Reni ø-peyak e iye.*

Reni ø-throw too

'Mesak threw away his clothes. Reni threw away (his/her clothes) too'

(37) a. *Anton ø-skoh metah r-ait*

Anton ø-like dog POSS-3M

b. *Tina ø-skoh e iye.*

Tina ø-like too

'Anton likes his dog. Tina likes (his/her dog) too.'

(38) a. *Alex y-ahe fane sau*

Alex 3M-see pig one

b. *Siska m-ahar Beni y-ahe e iye*

Siska 3U-know Beni 3M-see too

'Alex saw a pig. Siska knows that Beni saw (a pig), too'

(ECT: PY, MT, ET- 04/25/2021)

The speakers' judgements are described as follows. (36b) means *Reni threw away her own clothes* whereas (37b) means *Tina either likes Anton's dog or her own dog*. In (38b) the reading is sloppy: *Beni saw a pig but it is a different pig*. The results show that each elided structure has a different type of reading: (36b) has a strict reading, (37b) has both sloppy and strict readings, and (38b) has a sloppy reading. The three readings are represented in (39), (40), and (41) respectively.

(39) a. Reni threw Mesak's clothes, too. (Strict reading)

b. Reni threw Reni's clothes, too. (~~Sloppy reading~~)

(40) a. Tina likes Anton's dog, too. (Sloppy reading)

b. Tina likes Tina's dog, too. (Strict reading)

(41) a. Siska knows that Beni saw another pig, too. (Sloppy reading)

b. Siska knows that Beni saw the same pig, too. (~~Strict reading~~)

In terms of which element is selected to be elided, all Maybrat elliptical constructions appear to be identical to Japanese in (35). It shows that only NPs in the object positions can be selected to be elided. Aoun and Li (2008:252) offer a further explanation which suggests that the selection of an internal argument to be elided is available only in languages like Chinese because they lack *do*-auxiliary. Compare English ellipsis in (42) with (35).

(42) a. John likes the gift that you gave to him. Mary does, too.

b. John will like the gift that you gave to him. Mary will, too.

According to the authors, what these languages do to display the elided structure is using the uninflected verbs. Maybrat, too, does not have an equivalent *do-auxiliary* to perform VP ellipsis construction. So, the direct object position is left empty via co-indexation with an NP in the previous sentence. Like all instances of null objects in elided constructions, if a null argument is coindexed with an NP in the previous sentence, a *pro* is assumed to have a strict reading. If a null argument is coindexed with an NP within the same syntactic domain, a sloppy reading is assumed. In that case, it can be said that argument ellipsis may be the correct way of categorizing the null objects in Maybrat

under Saito's (2007) postulation (an elided pro should be coreferential with the previous NP in the previous clause).

Returning to the elliptical constructions in Maybrat, the sentences in (36), (37), and (38) show an asymmetry in the readings. It implies that a definite reading of an object *pro* cannot be established consistently in the constructions. This may also indicate that there is a relationship between the lack of grammatical agreement and the indefinite reading of a null object. This fact confirms suggestions made by Aoun and Li (2008) above and others (Kim 1999; Saito 2007; Hoji 1998; Takahashi 2008, Han et.al. 2020) on the absence of agreement and sloppy reading of elided object arguments. Maybrat's lack of object-verb agreement seems to share these authors' observations. It suggests that a sloppy interpretation of a null object should be taken into consideration. I would take this to be predictable as seen from the previous examples of null objects in Maybrat. However, it needs to be perceived differently because there are contexts where the null objects can be *pro*(nominals) that are managed by certain syntactic mechanisms (e.g., SVCs).

The ellipsis constructions have provided additional evidence for the type and distribution of null objects in Maybrat. Although there are similarities between Maybrat and the East Asian languages in terms of null objects in ellipsis constructions, it does not follow that a null object in Maybrat should be treated as an argument ellipsis. Based on the data presented, I continue to assume that topic may be a potential condition for the interpretation of the null objects. Since a discourse topic is a definite NP, it has definite features that can be transmitted to establish the definite interpretation of an object *pro*. I assume that coreference is then a syntax-discourse component that specifies the

definiteness of an unrealized object. Otherwise, a full interpretation cannot be achieved, and the derivation crashes. I will pursue this assumption further in the following chapter under the Minimalist framework of Agree.

4.4. On Verb Serialization and *Pro*

In the previous sections, I have made some remarks on SVCs in Maybrat in relation to certain types of *pro* in the subordinate clauses. According to Aikhenvald (2006) a verb serialization marks syntactic dependency to compensate for the lack of the markers for subordination or coordination. In general, it forms a single event and shares an argument. This section discusses in detail the role of SVCs in the interpretation of *pro*. (43) and (44) are two examples of SVCs taken from the elicitation task. Sentence (43) has an infinitival clause whereas (44) a subordinate clause. The SVCs here are those that establish the syntactic functions and meanings without any grammatical markers.

(43) pro$_i$ *y-awe* /pro$_i$ *y-amo y-ame kak/*

3M-say 3M-go 3M-stab cuscus

'(He) said (he) wants to stab a cuscus'

(44) *Siska$_i$ m-awe* / pro$_i$ *ø-hawe m-ama ø-fri nuo/*

Siska 3U-say ø-refuse 3U-come ø-meet 2S

(Lit.) 'Siska said she refused to come to meet you'

'Siska said that she does not want to see you'

(ECT: ET-06/15/2021)

In (43) the verbs *y-amo* '3M-go' and *y-ame* '3U-stab' form an SVC that expresses a direction toward stabbing something. In (44) the verbs *m-ama* '3U-come' and *fri* 'see' are sequenced to form a single event of seeing someone. Here, although (43) and (44) are different in the number of events, the serialization in each sentence appears to share an argument. The constructions in (43) and (44) take the null subjects as their agents. In terms of the interpretation, the null subjects in (43) can be identified formally through the pronominal agreement markers. Conversely, the null subject in (44) is coreferential with the matrix subject *Siska* that specifies the meaning of the null subject.

Another point to make in relation to SVCs and *pro* is word order. Aikhenvald (2006:37) introduces the terms *contiguous* and *non-contiguous* to explain the structure of SVCs. The former describes SVCs that cannot be interrupted by any grammatical elements (i.e., pronouns). The latter indicates a string of an SVC that can be interrupted by an NP. In the examples above, only the contiguous SVCs are assumed to appear: the serial verbs *yamo-yame* in (43) and *mama-fri* in (44). These types of SVCs cannot be separated by a full pronoun since when the two verbs come together, they may express an event or two events that are built on each other (See Dol 2007 for motion verbs in Maybrat). The examples of non-contiguous SVCs are (28) and (31) where overt pronouns can be inserted in the strings. In relation to the marking of grammatical function in an SVC, Larson (1991) suggests that the grammatical functions can be associated with the secondary predicate construction of English (e.g., resultative/purposive structure). In Maybrat, this can be seen from the slashes that are placed in (43) and (44) that mark a single intonation. With a single intonation reading the sentence would function as

resultative/purposive construction as seen from the English translation. In that sense, the subject *pro* is the covert subject or agent of a series of events in the constructions.

Different from (43) and (44), sentence (45) is an example of a prosodic marking of coordination and subordination for SVCs in Maybrat. The second slash in (45) marks the intonation break which marks the serial *mo-me* 'take-give' to indicate the event of taking/buying something and giving something. Put it another way, (45) has two events in a sequence that are marked by the intonation break: the event of taking (*mo*) and giving (*me*). The first slash following the NP *kak refo* marks the first pause that indicates the NP as the topic of the sentence.

(45) *Kak re-f-o*$_i$ / *rae m-o* ~~*kak refo*~~$_i$ / *m-e* pro$_i$ *m-eme*$_i$
meat Loc-very.near-U people 3U-take 3U-give 3U-mother
saruk pro$_i$
ø-cook
'This meat, the people took/bought (it) and gave (it) to her mother to cook
(ECT: MT- 08/24/2021)

The topic construction as in (45) may also involve left-dislocation of an object NP that demonstrates a contrastive topic. I continue to assume that a topic can be base-generated in or moved to A'-position. The topic binds the empty object position, and it is thus an instance of a variable under Principle C. Furthermore, different from a pronoun that can freely take any NPs as its antecedent, *pro* in (45), like the other null objects described so far, needs to be bound by a discourse topic. Otherwise, it will receive an arbitrary interpretation which should be unacceptable if it is unexpressed. (45) is another example, in addition to (32), that shows that a resumptive pronoun cannot be assumed to appear for the lack of the equivalent pronoun.

A serial verb construction in Maybrat may involve a combination of the uninflected verbs and the inflected ones. It has been shown that the presence of a grammatical agreement marker helps identify the content of a *pro*. Thus, when the uninflected verbs appear, it can be predicted that the interpretation of *pro* may not be straightforward. Take (46) and (47) as the examples, in addition to *pro* that appears in the SVCs discussed previously.

(46) *Pose t-o* / pro$_i$ ø-*skoh p-it awiah*
In the past near-U ø-like 3P-eat taro
'In the past (Emph), (we) liked to eat taro'

(47) *Ees* pro$_i$ *p$_i$-roh p-emo* ø-*wasik t-o* / *pro$_i$* ø-*hato* pro$_i$ *wia*
Before 1P-go.down 1P-go ø-clear near-U ø-survey firstly
'Before (we) go down there to clear (the land) (Emph), we survey (it), first'
(NRT: LT- 05/18/2021)

In (46), the uninflected verb ø-*skoh* 'like' joins the inflected verb *p-it* 'eat' to express the mental state of liking. In (47), three verbs are in a sequence: *p-roh* 'descend', *p-emo* 'go', and ø-*wasik* 'clear', in which the latter is uninflected. The three verbs constitute the main event of clearing something that is induced by the motion verbs. The SVCs in the two examples appear to be non-contiguous since *pro* can only be the subjects of the series. In other words, the serial verbs in (46) and (47) have one omitted subject argument that precedes the constructions. While *pro* in (47) can be identified from the verbal person markers of the first and second verbs, *pro* in (46) cannot be interpreted in a similar way because it is not inflected with a person marker. I suggest that *pro*, in this context, can still be identified in an unconventional way. The inflected verb in the second position can 'rescue' such an identification by means of the shared argument and event.

This seems plausible since an action in an SVC is performed by the first verb and carried on to the next verbs in a sequence (Lords 1974 cited in Aikhenvald 2006:10).

Specific to sentences like (46) and (47), the speakers also use the demonstrative form *t-o* to indicate the syntactic boundary. This form, according to Dol (2007), is a demonstrative form that functions as an anaphoric marker. I assume, in addition to Dol's observation, that the element functions as an emphasizer for a proposition that has been made in relation to another proposition when expressing subordination. It gives the specific and definite interpretation of the referent. So, sentence (46) can mean *in the very days of the past, we liked to eat taro*. In other contexts, this form can have the anaphoric meaning as *in the past, as I already told you, we liked to eat taro* which is what Dol (2007) suggests. Yet, it requires further studies in order to get an appropriate description of the grammatical functions of the form in the two contexts.

Since prosodic marking seems to be distinct in Maybrat SVCs, it is necessary to discuss another example. Consider (48) below from Dol (2007:186). This example demonstrates Dol's observation that intonation marking is crucial not only in determining a grammatical function but the meaning of a sentence. (48) is another striking example of how intonation break can mark subordination and how *pro* is discerned in relation to verb serialization in Maybrat.

(48) a. *pro* *t-sam* *t-aut* *ara*

1S-scared 1S-climb.into tree

'I'm afraid to climb into the tree (=I don't dare)

b. *pro t-sam* */ pro t-aut* *ara*

1S-scared 1S-climb.into tree

'I'm afraid and I climb into the tree

(49) a. *(There is x, x afraid climb tree)*

b. *(There is x, x afraid ∧ x climb tree)*

According to Dol, if the sentence is expressed with a single intonation, the construction would function as a subordinate clause as in (48a). If a pause is placed between the two verbs (*tsam* 'afraid, *taut* 'climb'), a coordinate construction is obtained as in (48b). What follows is not only the change in the grammatical structure, but also the meanings. (48a) has an unrealized subject whereas (48b) has two *pros* which can be taken as the agents of the two events. In terms of the meanings, if a single intonation is applied as in (48a), the sentence may express the state of being afraid of something. When there is an intonation break as in (48b), it involves the two events that are coordinated, and the latter is a consequential event.

It should be noted that the examples provided so far involve *pro* with identifiable person features. As has been described, Maybrat 3rd person marker agrees partially with *pro*. Thus, it should call for a different treatment in relation to SVCs and the occurrence of *pro*, not to mention the uninflected verbs. Supposing the subjects of the verbs *ø-skoh* 'ø-like' in (46) and *ø-wasik* 'ø-clear' in (47) had the unspecified 3rd feature marker, the interpretation of the *pros* would receive similar arbitrary interpretations which would not be acceptable. This means the appearance of *pro* should be subject to a referent mentioned before or understood from a given discourse. Take, for example (50).

(50) pro *tutu* *fane* *ro* *m-amo* *ø-tewok* *amah* *ro* *Kaspar*
ø-chase pig REL 3U-go ø-enter house REL Kaspar
'(I/we/you/they/she/he) chased the pig (that) entered the house of Kaspar'
(ECT: PY -08/24/2021)

The SVC in this sentence is the second verb *m-amo* '3U-go' and the third verb *ø-tewok* 'enter.' The former is an inflected verb whereas the latter is not. Only the first verb of the SVC may provide a formal identification for *pro* while the second appears to be incapable under the rich agreement framework. If the identification occurs, the underspecified agreement morpheme of the first verb (*m-*) could only do so with an arbitrary interpretation of *pro*. The only recourse to the identification of the null pronoun is by having *pro* to be coreferential with a topic (i.e., Aboutness topic). Again, this is another instance where *pro* may need to be interpreted as a variable rather than a pronoun for it is bound by a discourse topic (i.e., null topic).

To sum up, pro-drop in SVCs in Maybrat provides a different view of how *pro* is identified. When it appears with a string consisting of the inflected verbs, the interpretation may be subject to the agreement inflection head. When the string involves the uninflected or the verbs with the underspecified agreement markers, the interpretation may be dependent on another inflected verb that is present in the construction. If not, the interpretation of *pro* needs to be linked to an NP that is overtly present in the previous sentences. Otherwise, a discourse context may be assumed to satisfy its specific/definite referent. I have continued to assume that when this happens, such a *pro* is an A'-bound variable since its interpretation is dependent on or bound by the available topic (overt or null).

Another aspect of pro-drop in SVCs that may pose a challenge in the formal analysis of pro-drop is argument sharing (Durie 1997). For example, Baker (1989) has tried to provide a formal account of SVCs in relation to object argument sharing but his analysis is problematic to some authors (e.g., Durie 1997; Carstens 2002; Collins 1997; Larson 1991). In fact, these authors have offered alternative analyses of pro-drop in SVCs which I have adopted in explaining the derivation of *pro* in Maybrat verb serialization in the following chapter.

4.5. Notes on Null Arguments in Maybrat

This section provides some notes on the constraints on the types, distribution, and interpretation of the null subjects and null objects in Maybrat. It specifically discusses the circumstances where *pro* may or may not appear as well as the extent to which ϕ-feature specification contributes to the interpretation of the null subjects. The discussion may also include other aspects that have not been discussed in the previous sections.

The pronominal subjects are generally constrained from phonological realization if they appear with the uninflected verbs. Many verbs in Maybrat are projected into the syntactic structure in bare forms such as ø-*saruk* 'cook' in (13), ø-*peyak* 'throw away' in (36), and ø-*tewok* 'enter' in (50). Without overt pronominal markers in the verbs, the null subjects may not be identified linguistically, and the full-fledged NPs or pronouns are used. Alternatively, they have to be bound by a discourse context or topic. However, I have shown that in certain contexts, the null subjects can still be identified or interpreted for their contents (i.e., ϕ-features). Examples (13) and (14) show this, represented in the following as (51) and (52). The examples indicate that the prevalent agreement licensing

of *pro* may not be applicable for the null subjects. They may only be bound by an available discourse topic or context. However, an embedded clause that has a verb with a pronominal marker can recover the identity or content of the missing subject of a higher clause. I have referred to such cases as indirect or unconventional identification of *pro*.

(51) pro$_i$ ø-*saruk po mati* pro$_i$ *m$_i$-ari muniah m-atu*

pro ø-cook thing and.then pro 3U-hear rifle 3U-exploed

'(they/she) were/was cooking something when (they/she) heard the shooting'

(52) *Fire pro$_i$ ø-skoh pro$_j$ mi pro$_i$ m$_i$-ama*

If pro ø-like so 3U-come

'If (she/they) like (it), (she/they) can come'

(ECT: FT- Fall 2020)

Although *pro* is observed in most matrix sentences in Maybrat, the omission of the matrix objects and embedded objects appear to be restricted. In contrast to the subjects of the embedded clauses that can be dropped freely, objects of the matrix and embedded clauses are obligatory overt if the context is not salient. Consider (53) where the object of the matrix clause is overtly pronounced. It appears that verb types may account for the phonological realization of objects in such constructions. The verbs such as ø-*sokuos* 'order' and *m-ekias* '3U-tell' are control verbs that take objects as well as infinitival clauses as the direct complements. Nevertheless, I have assumed that the controlled object can be unrealized in the context when there is another complement-taking verb such as *m-awe* '3U-say' that follows the control verbs directly as discussed for sentences in (11ab), (12ab) and (27ab).

(53) *a*. *Mesak sokuos au mas ku r-au*

Mesak ø-order she 3U-hold child POSS-3U

'Mesak asked her to carry her child'

b. **Mesak sokuos pro mamo m-epo ku r-au*

Mesak ask 3U-go 3U-hold child POSS-3F

'Mesak asked (her) to carry her child" (ECT: MT- 08/25/2021)

Pro can be construed within a serial verb construction through intonation marking. An appropriate intonation break would reveal not only the syntactic functions and meanings, but also the grammatical positions of *pro* as shown in Section 4.8. Sentences (48ab) have demonstrated that applying an appropriate intonation break or pause would give a sentence subordinate clause as in (48a) and coordinate clause as in (48b). However, since an SVC in Maybrat can have two interpretations by means of the intonation contours, it is assumed that not all verb serializations in Maybrat would allow *pro*. This is illustrated by SVCs which involve the motion verbs *p-roh*'descend' and *p-mo* go' as in (47), and *m-amo* 'go' and ø-*tewok* 'enter' as in (46). Thus, it is necessary to note that some SVCs are contiguous whereas some are non-contiguous with regard to whether a (*pro*)noun or an NP can appear in a string of an SVC or not.

NPs with inanimate features that are topicalized may not be resumed by pronouns internally in a sentence while it may be seen for those with animate features (i.e., human). As seen in (54), the resumptive pronoun can appear in the VP internal position (if emphasized) once the topic NP *pi Beni* 'Mr. Beni' is introduced in the left periphery of the sentence. This does not hold for a non-human NP even though it appears in the same

topic position as in (55) for *fane rapuoh* 'wild pig'. One obvious reason is that Maybrat does not have the third-person pronoun equivalent to the third impersonal forms like *it* in English.

(54) *Pi Beni$_i$, rae m-ai* (ait)$_i$ *y-atiet*

Father Beni, people 3U-beat 3U-die

'Mr. Beni, the people beat (him) to death' (and he died)

a. *fane rapuoh, rae ø-tutu m-amo aya*

pig forest men ø-chase 3U-go river

'Wild pig, the people chase (it) down to the river

b. **Fane rapuoh, rae tutu [~~fane rapuoh~~] mamo aya*

(ECT: MT & ET- 08/28/2021)

The generic-indefinite pronouns are normally pronounced unless they are mentioned earlier in the discourse or preceding sentences. The following gender nouns have generic-indefinite features in Maybrat: *rae* 'men', *fnia* 'women', *kukek/kukiniah* 'children', *satoh* 'entire belongings/family.' They normally have the semantic property of bare plural NPs which can be interpreted as singular/plural or definite/indefinite. Take, for example, the following sentences.

(55) *rae sepe m-awe pi Yepoh$_i$ ait$_i$ hawe yeno remo*

Men military/police 3U-say father Yepoh he ø-refuse 3M-do village

'The police said that, Mr. Yepoh, he does not like to open a village'

(NRT: RT- 04/21/2021)

(56) pro *t-awe ku kiniah m-amo ø-saka rae te-au*

1S-say child small 3U-go ø-pick.up man Loc.-U.Dist

"I asked the children to pick up man/men there"

The subject position in (56) is filled with an overt NP whereas in (57) it is empty. The verb like *t-awe* '1S-say' has an agreement morpheme with full ϕ-features that can recover the subject *pro* as in (56). However, the sentence also has the verb *m-awe* '3U-say' that is inflected with a morpheme which is unspecified for person and number features. Because of the underspecified ϕ-features, it is not able to identify the null subject successfully. It can be assumed that the generic property of the bare plural NP along with the inability of the 3rd person feature to designate the ϕ-features makes it impossible to leave the subject positions in sentences like (56) unpronounced. The underspecified properties render a neutral semantic interpretation of *pro* unless contexts recover it.

4.6. Summary

This chapter has shown that the null subjects and the null objects appear in the syntax of Maybrat. The null subjects show some asymmetries in terms of ϕ-featural agreement. The verbs agree fully with the 1st and 2nd person as well as the 3rd singular masculine null subjects. In contrast, the verbs only agree in person with the 3rd person singular masculine null subjects. Many verbs in Maybrat are also uninflected. That is, they do not show agreement with any of the subject pronouns. The same holds for the appearance of the null objects. Despite these facts, subjects and objects are freely dropped in many contexts. These facts have shown that discourse context may dominate the conditions for the appearance of the null subjects and null objects in Maybrat.

It also has shaped how the null subjects and null objects are interpreted. So far, I have assumed that the null arguments can be the instances of a pronoun, variable, or both. In general, when the null subjects appear with the fully inflected verbs (i.e., having full ϕ-features), their contents can be recovered by the inflected agreement markers alone which identify them as pronouns. When the null subjects involve the underspecified 3rd person pronouns, their contents can be interpreted by means of both the agreement feature (i.e., person feature) and the presence of a discourse topic. I have regarded such null subjects as pronominal variables. When the null pronouns appear with the uninflected verbs, their contents need to be recovered only by a given discourse topic, provided that local binding relation or co-indexation cannot be maintained. I have also assumed that such null pronouns should be interpreted as variables.

Such variable status of *pro* is more apparent when it comes to the null objects due to the lack of object-verb agreement. However, it has been shown that in certain contexts, the appearance of null objects can be interpreted as a pronoun as well. This is seen when they appear in the island structures which include the complement clauses and the adverbial clauses. Interestingly, the serial verb constructions appear to be another context that defines the pronominal status of the null subjects that appear with the uninflected verbs and the null objects. I have assumed that an indirect agreement can be applied for the identification of *pro* when it appears in a control structure formed by an SVC. Thus, it can be said that both syntax and discourse mechanisms play important roles in the interpretation of the null subjects as they do so for the null objects in Maybrat.

CHAPTER 5

ANALYSIS

5.1. Introduction

The previous chapter shows that the speakers drop not only the subject but also the object of a finite clause. It also shows that subject *pro* appears in sentences with both the inflected and the uninflected verbs. Many inflected verbs are also composed with the 3rd person pronoun marker *m-* that is underspecified for number and gender features. The full ϕ-agreement is found only for the 1st, 2nd, and the 3rd singular masculine pronouns. Along with these are the uninflected verbs which lack the agreement at all. Uniquely, the morphological variation does not restrict the pronominal forms to be dropped in many sentential contexts.

Based on these facts, I assume that some licensing conditions may contribute to the appearance of null arguments in Maybrat. However, if each is pursued, there would be an array of conditions which complicates not only the pro-drop parameters, but also the principles of universal grammar. It subsequently brings about two questions: How can a Maybrat learner consistently drop an argument of a finite clause? Does she or he have to acquire the conditions randomly in order to produce a grammatical sentence? It has been stipulated under Universal Grammar that the learner should pick up language information under the *poverty of the stimulus* conditions (Berwick et.al. 2011; van Gelderen 2017). That is, the learner does not learn all forms or rules of a language to reach a full comprehension. It suggests that there has to be underlying conditions (i.e., internal grammar) that enable the learner to cope with the morphological variation and *pro*-drop. Building on such conception, I assume that the appearance of null arguments in

Maybrat is triggered by morphosyntactic mechanisms, discourse context, or a combination of both aspects. In the remainder of this Chapter, I offer an alternative analysis which seeks to unify the licensing conditions for the null subjects and null objects in Maybrat.

This chapter is organized as follows. In Section 5.2, I set up the framework for the analysis by highlighting the main issues of the types and distribution of null arguments in Maybrat. This, in general, encapsulates the asymmetry in the agreement features and pro-drop. The main sections of this chapter are 5.3 and 5.4, which provide the formal analyses of the licensing conditions and identification of the null subjects and null objects, respectively. The sections review the evidence that syntactic and discourse conditions can contribute to the appearance of the null arguments in many contexts, even though the latter condition may be more common for the appearance of the null arguments. It includes the appearance of *pro* in the serial verb constructions, discussed specifically in Sections 5.3.5 for the null subjects and 5.4.2 for the null objects. Section 5.5 discusses the implications of Maybrat pro-drop behaviors for the current pro-drop theory and proposes an analysis that seeks to unify the conditions for the appearance of the null arguments. Section 5.6 concludes the chapter.

5.2. Setting up the Framework

Maybrat pro-drop appears in a variety of sentential contexts. The null subjects appear in clauses where verbs are either inflected or uninflected with agreement markers. Like the null subjects, the null objects appear in simple and complex clauses or sentences.

For explanatory purposes, consider the following examples from Chapter 4, repeated here as (1-6).

(1) pro *y-fot* *ru* *sau*
3SM-catch bird one
'(He) caught one bird' (ECT: MT-09/25/2021)

(2) pro *m-he* *rae* *sepe*
3U-see man rifle
'(she/they) saw military personnel' (NRT: RT-04/21/2021)

(3) pro *ø-skoh* *tawer* *aya*
ø-like fishing.with.rod water
'(I/you/we/they/she/he) like fishing.' (ECT: ET-10/28/2021)

(4) *Joni*$_i$ *y-awe* *Linda*$_j$ *m-he* pro$_k$ *iis*
Joni 3M-say Linda 3U-see yesterday
'Joni say Linda see (him/her/them/it) yesterday' (ECT: ET-10/30/2021)

(5) *rae* *m-no* pro$_i$ *m$_i$-atak*.
man 3U-do 3U-angry
'People made (her) angry.' (ECT: MT-10/28/2021)

(6) *fi-re* *au$_i$* *ø-skoh* *ø-farkor* / pro$_j$ *p-tu* pro$_i$ *m-ama* /
similar.to-PART 3U ø-like ø-learn 3P-call 3U-come
"If she$_i$ likes to go to school, (we$_j$) call (her$_i$) to come."
(ECT: ET-10/30/2021)

Null subjects in (1) and (2) appear in transitive clauses, but only in (1) the verb agrees in person, number, and gender. In (2), as in (4), (5), and (6), the verbs only agree in person. In (3), the verb does not show any agreement at all. *Pro* also appears in the serial verb construction (SVC) in (5) and in the second clause of (6). The first *pro* appears in the subject position of the first and second verbs: *p-mo* 'go' and *p-tu* 'call,'

which are inflected with agreement markers. For convenience, I will use the term *pro* as a cover term for both null subjects and null objects throughout this chapter.

The main question that is normally raised in relation to pro-drop analysis is: what conditions license a *pro*-drop and identify its content? It has long been noted in the literature two views on the conditions that license *pro*-drop in a finite clause. The first one considers it to be licensed by a verbal inflectional head that has the matching ϕ-features, commonly known under the Rich Agreement Hypothesis (RAH) (e.g., Taraldsen 1980; Chomsky 1981; Rizzi 1986). Under the hypothesis, the agreement markers as in (3) and (4) can recover the identities of the missing subjects. Among scholars who proposed this view, Rizzi (1986:524, 520) has been cited the most for his comprehensible recast of the view as represented in (7).

(7) a. Formal licensing
pro is Case-marked by X^0
b. Interpretation
Let X° be the licensing Head of an occurrence of pro: then pro has the grammatical specification of the features on X° co-indexed with it.

According to Rizzi, the fact that *pro* appears in the grammatical subject or object positions suggests that it is licensed by the verbal inflection (agreement) head which also governs the Case position. The identity of *pro* (i.e., ϕ-features) is identified by the verbal inflectional head that is coindexed with it. In the current generative perspective, the functional head is on T (e.g., Italian) in the case of null subjects and *v* in the case of null objects (e.g., Pashto).

This view soon receives criticism for being based on pro-drop observed in (European) languages that typically have verbal agreement. Huang (1984) has been one among the scholars who reject this view with his analysis of pro-drop in languages like

Chinese (i.e., non-agreement languages). Huang observes that the languages he observed are non-agreement languages and they allow both the subjects and objects to be dropped. In other words, a verbal inflectional head cannot be the only condition that licenses *pro* and identifies its content. Equally important is the fact that many of these languages lack grammatical Case. Huang proposed that *pro* in these languages should be licensed and identified by discourse context. Put it another way, when these languages drop a subject or object, it is not managed by means of the verbal inflectional head, but by being coreferential with a discourse topic. This view has become the second condition for pro-drop licensing and identification in the literature.

The examples above seem to show the possibility that either morphological agreement or discourse context or both can be the licensing and identification conditions for *pro*-drop. The null subjects in (1), (2), (4), (5), and (6) appear in clauses where the verbs are inflected with person agreement markers. This may suggest that their appearance and identification can be licensed by the verbal agreement heads. Even so, Maybrat does not have a grammatical Case system. The grammatical positions of the subjects and objects are assigned by the strict SVO order. More strikingly, the verbal inflection heads as in (2) can only identify the person feature of the null subject. This indicates that the null subject may not be licensed or identified successfully by the verbal inflection head. Such *pro* appears to have pronominal features and variable features for being underspecified. Furthermore, the appearance of null subjects in structures like (3) involves bare verb forms. Its content can only be recovered by an appropriate discourse context. The same holds for the null objects in (4), (5), and (6) due to the fact that Maybrat does not have object agreement. Thus, while *pro* in (1) and (2) may exhibit the

inflectional head licensing condition, the rest of the null arguments appear to be licensed by discourse context. This has an effect on how *pro* is interpreted. If it is licensed by the verbal agreement head, it may be an instance of a pronoun (A-bound pro). In contrast, it may be a variable, if it is licensed by a discourse topic (A'-bound pro) as far as Principle C of the binding theory is concerned. Alternatively, the combination of both interpretations may be assumed for the underspecified *pro*(nominals).

It should be noted that *pro* as in (5) and (6) involves SVCs which I assume has not received much attention in generative grammar, let alone the Minimalist perspectives. Some scholars, however, have recently proposed few accounts on the derivation of *pro* in SVCs under generative framework (e.g., Baker 1989; Larson 1991; Agbedor 1994; Carstens 2002; Collins 1997, among others). These authors seem to agree on one thing in relation to *pro*-drop in SVCs i.e., how argument sharing is represented at LF. While very few have suggested that argument sharing is represented from D-structure through the LF/PF interface (notably Baker 1989), the rest appear to suggest that there is a different projection of *pro* that is subject to theta criterion. I take the latter point of view as the point of departure for the appearance of *pro* in SVCs in Maybrat.

Having established this framework, it can be expected that Maybrat *pro*-drop behaviors should be approached in two general ways. *Pros* that appear in sentences like (1) and (2) may well be accounted for under the rich/strong agreement perspective. Those that appear in the rest of the sentences may be approached either by weak agreement head, no agreement head (i.e., discourse-bound analysis), or a combination of agreement and discourse-related conditions.

It is necessary to point out that this analysis is inspired by the Minimalist framework of Agree (Chomsky 2000; 2001; Pesetsky & Torrego 2007). Under this framework all lexical items that enter a derivation have formal features. Some of these features are uninterpretable (e.g., uninterpretable ϕ-features of T) while some are interpretable (e.g., interpretable ϕ-features of *pro*). Furthermore, I assume, following (Holmberg 2005), that *pro* is a weak pronoun that has an unvalued D-feature which needs to be valued by T. Yet, in some contexts such a weak *pro* is motivated by weak T as well. That is, it may not be able to value *pro* due to the absence of the relevant features (e.g., D-feature or ϕ-features). I will assume with Chomsky (2000; 2001) and Miyagawa (2010) that certain features can be inherited from C to T (e.g., ϕ-features and topic features) or can be transmitted to *pro* directly. Since an optimal derivation requires the full interpretation of a linguistic expression at LF/PF representations, all the uninterpretable/unvalued features have to be valued through *Agree* operation (Chomsky 2000; 2001; Pesetsky & Torrego 2007). Thus, *pro* and T need to enter into the *Agree* relation where each can receive valuation for each other's uninterpretable features. If this kind of *Agree* cannot be maintained due to the lack of the verbal inflectional head (e.g., in the case of the uninflected verbs), I assume that *pro* and C enter into a long distance *Agree* relation. In this respect, only C values the uninterpretable features of *pro* (e.g., topic feature and D-feature).

5.3. Analysis of the Null Subjects

I have assumed that there may be two general ways to account for the appearance of a *pro* in Maybrat. The appearance can be accounted for as the result of (1) the coreference or coindexing with the ϕ-inflection heads; or (2) the connection with a discourse topic. As has been described, Maybrat pro-drop behaviors appear to reflect either one or both conditions. Thus, the analysis that I propose here is established on the following assumptions. First, certain *pro*-drops are motivated by local agreement with the inflectional head T through C-to-T feature inheritance (Miyagawa 2010; 2017a). This applies to null subjects with the underspecified 3rd person feature and those with the uninflected verbs. Second, *pro* is a weak pronoun in terms of a definite/coreferential feature (i.e., uninterpretable D-feature) that needs to be valued by T or C to become definite (Holmberg 2005; 2010). This includes a pronominal variable that is bound by a topic and is base-generated at the CP domain. Third, *pro* may move covertly as far as Spec-TP after an *Agree* operation is completed. The movement is not motivated by Case or EPP feature checking but the rigid SVO order in the spirit of Aoun and Li (2008). The first and second assumptions will be extended to the appearance of null objects discussed in Section 5.3.8. It is important to note that this view is restricted, but not exclusive, to the appearance of the third person null subjects in Maybrat.

5.3.1. Full ϕ-agreement *pro*

As the name suggests, this section analyzes null subjects that appear in the clauses with full agreement marking. By full agreement, a verbal inflectional head has all the ϕ-features (i.e., person, number, gender). In Holmberg's (2010) account, these null subjects

are part of the consistent pro-drop languages (e.g., Italian) in that they are definite with a valued D-feature and considered full DPs. Consider the following Maybrat sentences from Chapter 4 repeated here as (8) and (9).

(8) *pro t-etien*.

1S-sleep

'(I) caught two birds'

(9) *pro y-efot ru sau*.

3SM-catch bird one

'(He) caught a bird.'

The agreement heads *t-* of the intransitive verb *t-etien* 'sleep' and *y-* of the intransitive verb *y-efot* 'catch' show agreement in person, number, and gender. The agreement indicates that the content of the null subjects can be identified by the verbal agreement inflections. The inflectional markers *t-* in (8) and *y-* in (9) have the full ϕ-features of the first-person pronoun *tuo* 'I' and third singular masculine person *ait* 'he' that have been omitted as seen from the translations.

Taking RAH into account, the full pronouns are not needed in the subject positions because the verbal inflectional heads alone can recover the grammatical features of the pronouns. In that case, the verbal agreement heads may be associated with full DP pronouns. This explains why a single verb in languages like (10) in Italian is grammatical. In other words, the presence of the pronominal marker in the verb is sufficient for it to be expressible without the overt pronoun in the structural subject position.

(10) Ø bev-o (Roberts & Holmberg 2010: 6)

drink-1S

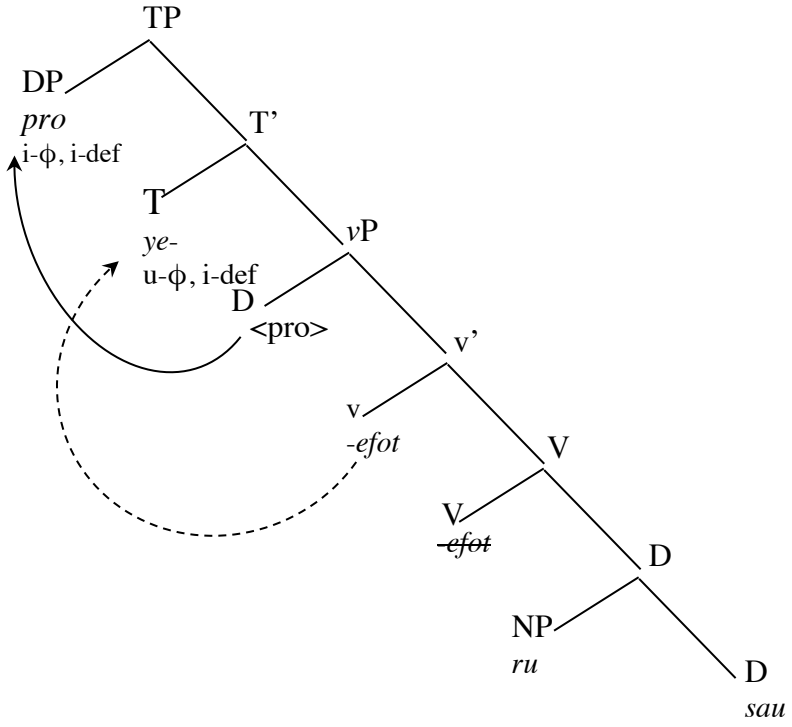
'(I) drink'

In addition to the identification of *pro*, null subjects in (8) and (9) precede the verbs. I assume that the verbs may specify the nominative positions of the null subjects through the strict SVO order of Maybrat. Under Rizzi's (1986) licensing condition, it can be said that the appearance of the null subjects in the grammatical positions is licensed by the verbal inflectional head. Besides, it is because the agreement heads of the verbs in sentences (8) and (9) have the matching ϕ-features with the missing subjects. I assume that (8) and (9) may perfectly reflect the relation between a strong inflectional head and *pro*-drop. Therefore, it is plausible to assume that the clauses are grammatical without the full pronouns in the subject positions.

I assume that *pro* in this context is a strong pronoun for having the strong agreement head. Thus, the derivation of the sentences in (8) and (9) proceed as follows. I restrict the discussion to (9) for the fact that *pro* in (8) involves the first person which is a salient speech participant (Siewierska 2004). Although one may argue that the agreement head as in (9) is strong in ϕ-features that can project a functional head, the nature of a third person pronoun as being non-participant, either free or bound, needs to be specified by another NP (Siewierska 2004; Bhat 2004; Lyons 1999). Following Speas' (2006) projection of strong Agr heads, once entering the derivation, the agreement morpheme *y-* in (9) lands at T structural position. *Pro,* with the interpretable ϕ-features and an uninterpretable D-feature, merges with the root verb *-efot* in the external θ-position and projects the lower VP. In contrast, the functional head T is definite with an interpretable

D-feature and uninterpretable ϕ-features. It creates an asymmetry of feature interpretability that seeks for feature valuation or agreement. Thus, once the Agree relation is established, T values the uninterpretable D-feature of *pro* and so does *pro* for the ϕ-features of T. Once checked, the computation deletes the uninterpretable features immediately. *Pro* becomes definite and may move covertly to the Spec-TP to satisfy the rigid SVO pattern of Maybrat. The derivation of (9) is sketched in (11).

(11) *pro y-efot ru sau*
3SM-catch bird one
'(He) caught a bird.'



As seen in (11), since the verbal inflectional head carries the 3rd person and number features that match the full pronoun features, the subject (i.e., *ait* 'he') with the matching features is not realized phonetically. In Rizzi's account, the subject that has

moved covertly to the subject position (Spec-TP) is motivated by Case licensing. Since Maybrat does not have a Case system, the possible licensing of the grammatical position is its strict SVO system as well as the external θ-assignment position (i.e., agentive position). This licensing of the grammatical position of *pro* has also been proposed by Aoun and Li (2008) with regard to pro-drop in Case-less languages like Chinese. Thus, it is plausible to assume that *pro* may move to Spec-TP from a θ-assignment position to a higher structure to meet the rigid SVO requirement.

5.3.2. The Underspecified *Pro*

Maybrat verbs agree fully with the 3rd singular masculine pronoun *ait* 'he,' but do not with the other third plural pronouns and NP forms. Verbs with the third person verbal marker *m-* are underspecified or neutral with a specified person feature. They include the 3rd singular feminine pronoun *au* 'she' and the plural form *ana* 'they', or any other NPs (e.g., rae 'man'). As an illustration, consider (2) above, repeated here as (12).

(12) pro *m-ahe rae sepe*

3U-see man rifle

'(she) saw military personnel'

As can be seen, the agreement marker *m-* only has the 3rd person feature and is underspecified for number and gender features. It can be said that without an appropriate context, the reference of the null subject can be directed to anybody or anything that sees somebody else coming. Such partial feature specification may not be held if *pro* is only licensed or identified from the rich agreement perspective. The fact that *pro* appears regardless of the partial agreement may also be due to the presence of an extra-linguistic

entity that is coindexed with it. It is fair to suggest that *pro* with the underspecified marker as in (12) needs to be coreferential with a discourse antecedent/topic despite the active person feature. Holmberg (2005; 2010) mentions that *pro* found in languages like Italian is considered DP because they have full ϕ-features. It can be assumed that *pro* as in (12) is indefinite with the partial ϕ-feature and as such, a weak one. The question that follows is: what conditions license its appearance and how is it interpreted?

Before answering the questions, it is necessary to discuss the nature of the inflectional head in (12). Having only a person feature, the inflectional head is defective in ϕ-feature which may suggest that T is deficient in ϕ-feature (Chomsky 2000; 2001; Pesetsky & Torrego 2007). It should also be true that such defective heads may not have proper D-feature as well in view of Holmberg's (2005) definition of D-feature. As Speas (2006) points out, such an inflectional head may be too weak to project an XP. With such conditions, T may not be able to enter into the Agree relation since it is inactive. Subsequently, T may not be able to value the uninterpretable D-feature of *pro*. According to Chomsky (2000; 2001), this condition would result in the derivation to crash. Empirically, without a specific or definite referent, *pro* in sentence (12) would be unacceptable.

Returning to the questions raised above, I suggest that the licensing and identification of *pro* as in (12) can be managed by C-to-T feature inheritance (Chomsky 2000; 2001). According to Chomsky (2001:8) C is inherently equipped with ϕ-agreement features which makes it *ϕ-complete*. In certain contexts where T is defective (e.g., non-finite clause in English), it is dependent on C which selects it. Through such selection ϕ-complete is inherited by T. It is then strengthened and can carry out a Case/agreement

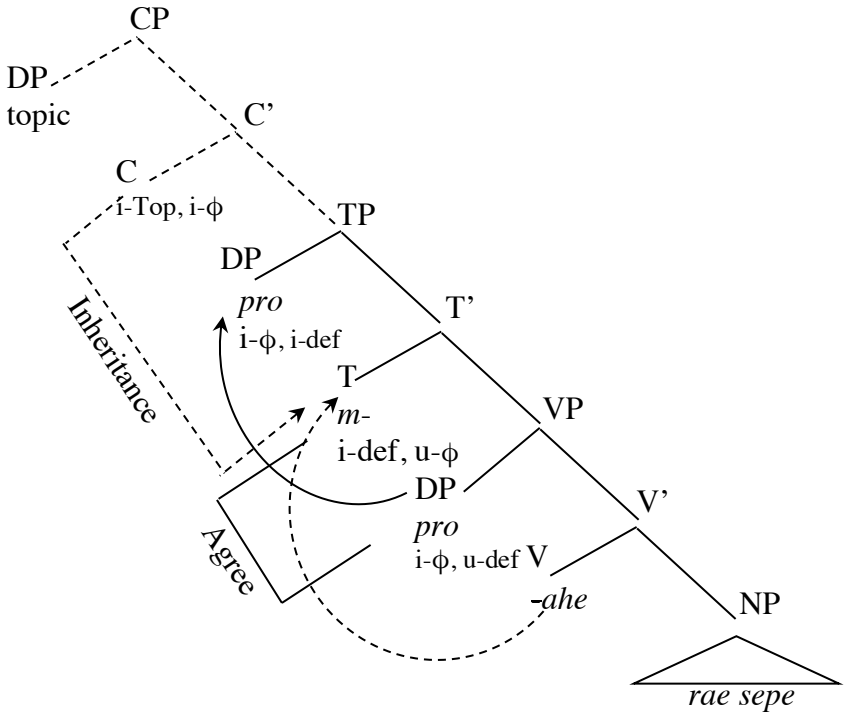
feature checking process. Building on this, I assume D-feature (i.e., definite/coreferential feature) as suggested by Holmberg (2005; 2010) may also be hosted by C which can be transmitted to T in a similar way. The D-feature in this context can be associated with the topic features (+/-topic) by the fact that "topics are definite" (van Gelderen 2013:173). To operationalize this framework, I adopt Miyagawa's (2010) recast of Chomsky's C-to-T feature inheritance.

According to Miyagawa, all languages have both agreement features (ϕ-feature) and discourse features (δ-feature) housed by C. These features are agreement features which serve as probes for an *Agree* operation. Once these features are transferred to the functional head, T becomes a ϕ-probe that can probe or search for a nominal category for a further operation. In the context of the defective agreement, head in (12), once D-feature (topic feature) is inherited, T becomes definite (i.e., interpretable D-feature). Since T now has the interpretable D-feature, it is active to enter into the *Agree* relation with *pro*. Thus, the *Agree* relation operates in a regular fashion. T probes down to check the features in *pro*. *Pro* values the uninterpretable ϕ-features of T while T values the uninterpretable D-feature of *pro*. *Pro* becomes definite and may move covertly to Spec-TP to satisfy the rigid SVO pattern of Maybrat clause. The root *-ahe* is raised to join the agreement marker *m-* on T to complete the verbal morphological requirement. The derivation of sentence (12) is represented in (13).

(13) pro *m-ahe rae sepe*

3U-see man rifle

'(she) saw military personnel.'



It is not necessary for the definite subject *pro* to receive a phonological realization at this point. This may explain why (12) is acceptable without a full pronoun when there is a partial or neutral agreement. It cannot be concluded that the inflectional head alone licenses and identifies *pro*. In the spirit of minimalism, T may mediate the agreement between C and *pro* to reduce the computational load if long-distance agreement had to be carried out. Besides, although T is defective it still has the person feature. Under the Phase Impenetrability Condition (PIC) (Chomsky 2001), the functional head is visible with the presence of the person feature. This means, if a long-distance agreement were operated, it would be intervened by the matching person feature T retains.

5.3.3. Licensing of *Pro* without ϕ-agreement

It has been shown that certain null subjects in Maybrat appear in the clauses that have uninflected verbs. In this context, the rich agreement hypothesis may no longer be relevant. The remaining condition is a rich discourse context. The null subjects may be coindexed with the discourse context for their referents to be specified. To illustrate this, consider (3) above as an example, repeated here as (14).

(14) *pro ø-skoh tawer aya*

ø-like fishing.with.rod water

'(I/you/we/they/she/he) like fishing'

Sentence (14) is similar to (12) in that *pro* has arbitrary interpretation, except for the person feature which is only found in the latter. As can be seen from (14), the verb ø-*skoh* 'like' is not inflected with any agreement markers. However, this fact does not prevent *pro* to appear in the subject position. Notice that in this example *pro* has the same distribution as *pro* that appears with the inflected verbs discussed so far. Thus, it seems fair to assume that the functional head T lacks agreement features but may maintain the structural position of *pro*.

This example appears to challenge Holmberg's (2005) postulation on the presence of D-feature in pro-drop languages. Holmberg mentions that "the absence of D in I ……. means that a null ϕP subject must be either bound by a higher DP or else interpreted as generic" (p.555). If *pro* in this example is ϕP type, it can be assumed that it should have a higher DP that interprets its content as the author argues for the partial null subject languages (Holmberg 2005; Roberts 2010). I take the phrase "higher DP" to be an NP in

a matrix clause where a null subject of an embedded clause can be coindexed with it. Now consider the following example with a DP in a matrix/higher clause.

(15) *Neles$_i$ y-awe* pro$_i$ *ø-skoh tawer aya*
Neles 3S-say ø-like fishing.with.rod water
'Neles$_i$ said (he$_i$) likes fishing
(ECT: MT – 11/07/2021)

It can be seen from (15) that the null subject is coindexed with the higher DP through which it gets the specific interpretation. In the following sections, I show that this is predictable since an embedded null subject should be referring to a higher NP. Bearing Holmberg's (2005; 2010) D-feature in mind, it should be clear that without an inflectional head, the uninflected verb would not have D-feature on the functional head. Thus, *pro* that is distributed in sentences like (14) has to take a discourse entity as its antecedent, otherwise it receives arbitrary or generic interpretation. In other words, such *pro* should be bound by a discourse topic. It should be assumed a variable whose specific interpretation is determined by an available discourse topic which is not the case for (15).

Nevertheless, the status of the null subject needs to be put into scrutiny. I refer to Huang's (1984:552) DJR and GCR principles to examine the status of *pro* in (15).

(16) a. *Disjoint Reference (DJR)*
A pronoun must be free from its governing category.
b. *Generalized Control Rule (GCR)*
Coindex with an empty pronominal with the closest nominal element.

It can be assumed from Huang's principles that the null subject in (14) is a variable whereas that in (15) is a pronoun. The former has no NP in the higher clause that coindexes with it and needs to be coreferential with a discourse topic that binds its

interpretation. The latter has its content specified by the higher NP *Neles* which confirms Principle B. Given that, it can be assumed that the variable interpretation of the null subject in (14) is bound by a silent topic in the sense of Huang's (1984). Having considered this framework, sentence (14) can be sketched as follows in (17). I will deal more specifically with the null subjects as in (15) when I discuss the null subjects found in the matrix sentences in the following section.

(17) [TOP e_i], pro$_i$ ø-*skoh* *tawer* *aya*.

ø-like fishing.with.rod water

'(I/you/we/they/she/he) like fishing.'

Having defined the status of *pro*, what remains is how *Agree* operates in this context. It is important to note that what is dealt with now is a topic in A'-position that binds *pro* in A-position. In the absence of a verbal agreement head, it is plausible to assume that the conventional Spec-head *Agree* (Chomsky 2000;2001) cannot be applied. In that case, it can be assumed that Miyagawa's C-to-T framework may not be applicable as well since the inheritance of agreement features from C requires an active inflectional head.

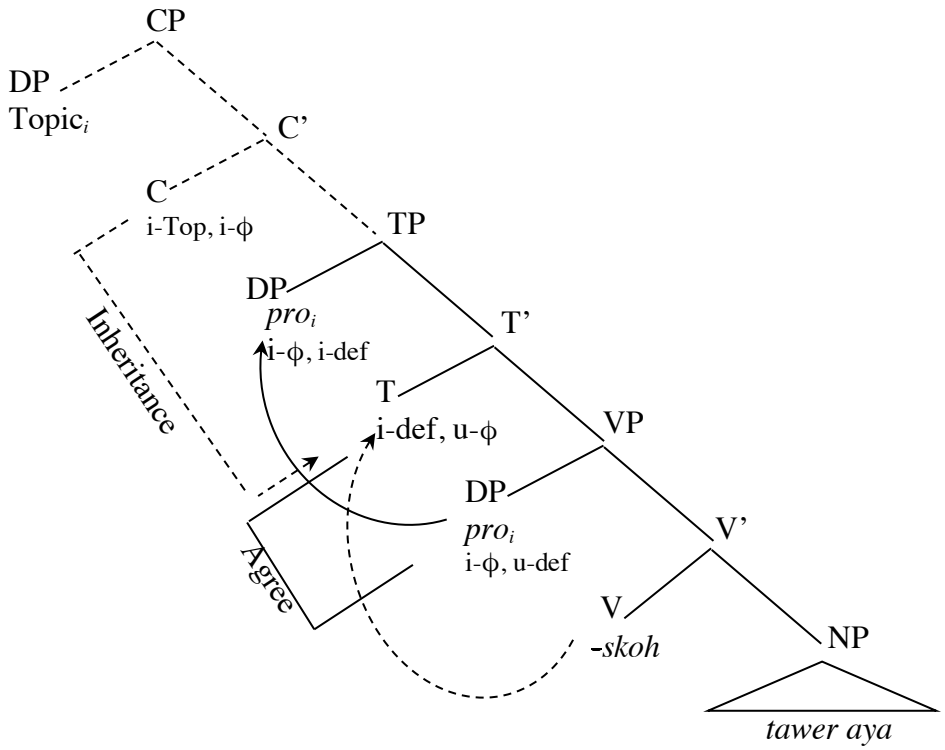
I suggest that *Agree* may operate in two possible ways. Firstly, a long distance *Agree* can take place between topic at C and *pro* at VP, assuming no element with the matching ϕ-features may intervene (Frascarelli 2007). If a distant *Agree* would be taken as the last resort, certain economic conditions need to be sacrificed in favor of gaining the full interpretation. Secondly, it can be postulated, following Miyagawa (2010), that all languages have a set of agreement features on C that can be transmitted to T for further local *Agree*. Despite the fact that both ways are feasible as far as the previous accounts of

Agree are concerned, I assume that Miyagawa's proposal may be potential in explaining the appearance of null subject in (14) for two important reasons. First, the null subjects that appear with the inflected verbs also appear with the uninflected verbs in the same distribution. Second, certain morphophonological constraints necessitate verbs in Maybrat to appear with "covert person prefixes" (Dol 2007:52). What Dol (2007) suggests may be put in parallel with the notions of "ϕ-silent" and "ϕ-overt" languages proposed by Sigurðsson (2011:269-270). According to Sigurðsson, ϕ-silent languages have silent ϕ-features on the functional head (e.g., Chinese) whereas ϕ-overt languages have ϕ-features that are overtly expressed on the functional head. Taken together, Maybrat may have a strong functional T regardless of the overt or repressed agreement head which is also a potential probe in this respect.

Building on Miyagawa's (2010) proposal of C-to-T Agree, the derivation of *pro* in (14) may proceed as follows. *Pro* is base-generated at VP whereas the covert (ϕ-silent) verbal morpheme is housed by T. I assume that since the verbal head has the invisible ϕ-feature it is inactive for an *Agree* operation. Holmberg (2010) refers to this as having weak/no D-feature on T. Holmberg suggests that the valuation of the feature should be managed by discourse topic, which is the domain of CP. At this point, I assume C has valued ϕ-features and valued topic features. Adopting Frascarelli's (2007) Aboutness topic, I consider the topic to be similar to D-feature, hence (+Aboutness/D-feature). Assuming T is defective with the silent ϕ-features and no D-feature, the ϕ-features and topic feature are transmitted from C to T. As a result, T becomes complete in that it has the uninterpretable ϕ-features and interpretable D-feature (i.e., topic feature). In other words, the inheritance activates T as the potential probe for an *Agree* operation. T

searches down for a nominal category; that is a *pro*, to check its uninterpretable ϕ-features. Once checked, T values the uninterpretable D-feature of *pro*. *Pro* becomes definite and may move covertly to Spec-TP to satisfy the rigid SVO order in Maybrat. The root is also raised to T, not to satisfy the EPP feature as suggested by Alexiadou and Anagnostopoulou (1998), but to satisfy the verbal morphological shape. The derivation of *pro* in sentence (14) is represented in (18).

(18) pro ø-*skoh* *tawer* *aya*
ø-like fishing.with.rod water
'(I/you/we/they/she/he) like fishing'



This section presents the analysis of the appearance of null subjects in clauses that have the uninflected verbs as shown in (14). Since the null subjects in this context are common in Maybrat sentences, I have assumed that the verbal functional head has silent/invisible ϕ-features. In order for the functional head (T) to enter into an *Agree*

relation with *pro*, T is selected by C for feature inheritance. The ϕ-features from C are transferred to T along with the topic feature (i.e., D-feature). Once valued, *pro* may move to Spec-TP and remain there without PF realization to satisfy the SVO projection.

5.3.4. Licensing of *Pro* in Matrix Sentences

It has been shown that null subjects appear in the subject positions of the matrix and embedded clauses in Maybrat. I assume that since Maybrat has two kinds of verbal morphology, both morphosyntactic and discourse features contribute to the licensing and identification of the null subjects and the *Agree* operation. In general, the inflected verbs may license *pro* by the agreement head whereas the uninflected ones may license it through coreference with a discourse topic. I have shown that the C-to-T feature inheritance brings together the two conditions into a single *Agree* operation that contributes to *pro*-drop. Nevertheless, in some contexts, such postulation may not be necessarily extended to different contexts. This is seen when a null subject appears in an embedded clause of a matrix sentence. I have already presented an example of *pro* in an embedded clause in (15), but I have not provided a detailed discussion about it. For ease of reference, consider another example of the embedded subject *pro* shown here as (19).

(19) *Lukas*$_i$ *y-awe pro*$_i$/$_{*j}$ *y-ahar fai re-t-o*
Lukas 3S-say 3S-know woman Loc.SPEC-near-U
Lukas$_i$ said he$_i$/$_{*j}$ knows that woman.
(ECT: FT – 09/15/2021)

As seen from (19), the embedded subject *pro* may refer only to the matrix subject *Lukas* but may not to an entity outside the sentence which is unacceptable. This is not the case for other pro-drop languages like Chinese. Consider the same structure in Chinese as

exemplified by Huang (1984) shown here as (20). According to Huang, there are two possible referents for the null subject in the embedded clause. It can be the matrix subject *Zhangsan* or an entity outside the sentence.

(20) Zhangsan$_i$ shuo [$e_{i/j}$ bu renshi Lisi]

Zhangsan say not know Lisi

'Zhangsan said that [he] did not know Lisi.'

The same distribution of *pro* is also observed in Finnish, Brazilian Portuguese, and Marathi (Holmberg, Nayudu, and Sheehan 2009). These languages have the restriction on dropping 3rd person referential pronouns. The pronouns can be null if matrix NPs control them. According to some scholars (e.g., Holmberg 2005; Holmberg, Nayudu, Sheehan 2009), this condition can be addressed by whether a pro-drop language has D-feature or not. Null subject languages like Italian, Spanish, and Greek have an unvalued D-feature on T whereas partial pro-drop languages like Finnish, Brazilian Portuguese, and Marathi do not. This condition requires *pro* to be coreferential with an NP of the higher clause.

Maybrat *pro*-drop behaviors as illustrated by (19) is different from these languages in one respect. Maybrat does not have any kinds of restrictions on dropping referential pronouns. It has been shown that the 3rd person pronouns are dropped freely either in the initial, medial, or final positions of different types of clauses. Also, the null subject in (19) has a strict interpretation that is coindexed with the higher NP. In addition, the subject *pro* appears with the inflected verb *y-ahar* that has the person marker that matches the matrix NP. Therefore, I assume that the verbal functional head T in (19) carries D-feature and unvalued ϕ-features.

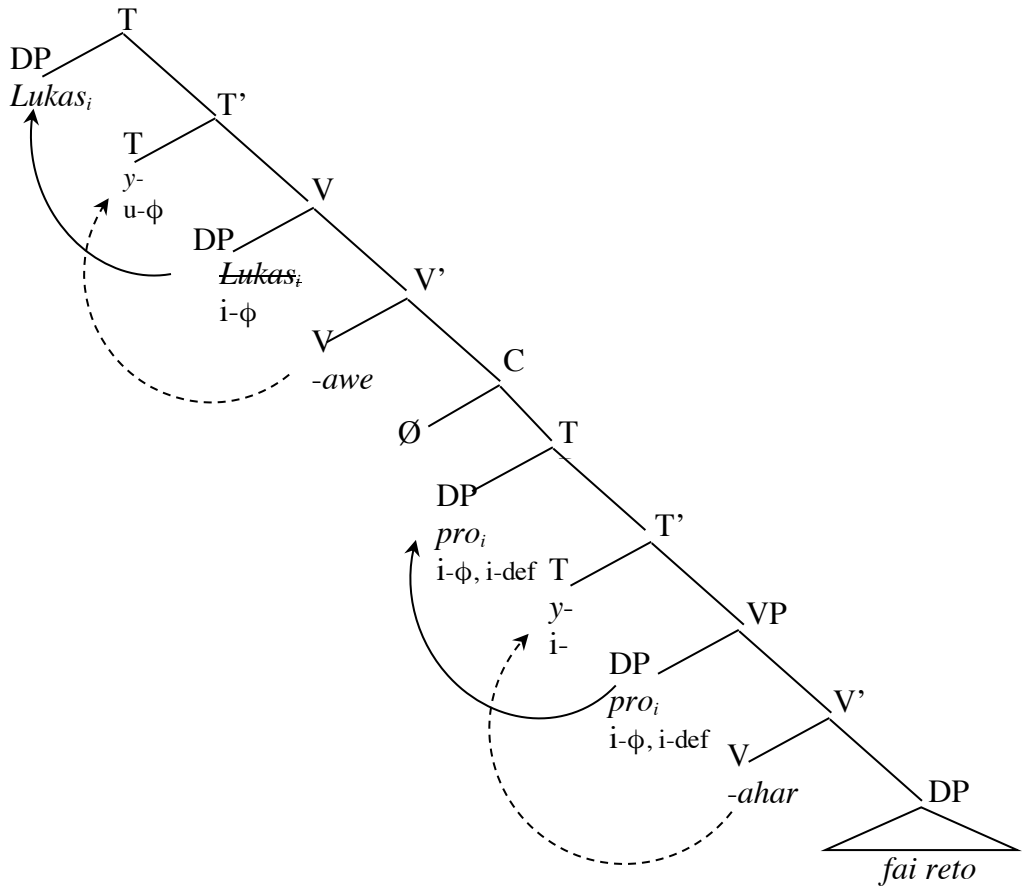
The derivation of *pro* in (19) may proceed as follows. *Pro* starts from the lower VP of the embedded structure as a weak pronoun with interpretable ϕ-features and an uninterpretable D-feature. The embedded functional head T is projected with the uninterpretable ϕ-features and an valued D-feature. T searches down to find *pro* to value its uninterpretable features. Once checked by *pro*, T receives the valued ϕ-features and T also values the uninterpretable D-feature of *pro*. *Pro* is now a definite *pro*(noun) which is coindexed with the higher NP Lukas as its antecedent. *Pro* may move covertly to the Spec-TP position to satisfy the rigid SVO order of Maybrat.

It should be noted that what I mean by covert movement is built on Chomsky's Move F (1995:266). That is, only the formal features (i.e., interpretable ϕ-feature, D-feature) move to Spec-TP which is more economical than overt movement. Besides, phonological realization is not needed here for the full interpretation at the semantic level of representation (LF). Given that, the root *-ahar* is raised to join the agreement morpheme *y-* for the morphological realization of the verb. Once the *Agree* operation is completed, sentence (19) is pronounced as a verbal clause without the full subject for its features have been recovered by the verbal agreement marker *y-* on T. The underlying representation of the derivation of *pro* in (19) is shown in (21).

(21) *Lukas*$_i$ *y-awe* *pro*$_i$/$_{*j}$ *y-ahar* *fai* *re-t-o*

Lukas 3M-say 3M-know woman Loc.SPEC-near-U

'Lukas$_i$ said he$_i$/$_{*j}$ knows that woman.'



I have demonstrated that the embedded *pro* in (19) takes the matrix NP as its antecedent. It is plausible to assume that the inflectional head is the licensing condition for *pro* because it has strong ϕ-features that can recover *pro*'s identity. Now, if the same *pro* appears with the verbs that have the underspecified ϕ-agreement marker *m-*, let alone the uninflected ones, it should be clear that such inflectional head licensing of *pro* is untenable. It can be predicted that T may be defective to license *pro*. It is obvious at this end that it requires feature transmission from C for an optimal derivation as suggested for *pro*-drop in (14).

Now consider (22) with the same structure except that the higher matrix has the 3rd singular feminine pronoun *Klara*.

(22) *Klara*$_i$ *m-awe* pro$_i$ *m-ahar* *fai* *re-t-o*

Klara 3U-say 3U-know woman Loc.Spec-near-U

'Klara said (she) knows that woman'

(ECT: ET – 11/27/2021)

As seen from this sentence, *pro* is coindexed with the higher pronoun even though the verbal person marker *m-* is underspecified for number or gender. What appears to be the plausible condition is that the presence of the NP *Klara* provides a specific interpretation for the embedded *pro*. It is obvious that the presence of the NP in the higher clause may also be the licensing condition of *pro*. Structure (22) provides another evidence that the verbal agreement head may not solely be the licensing condition for the full interpretation of *pro*. A possible assumption is that both morphological features and syntactic binding should be responsible for the licensing and identification *pro*.

I have shown that in the case of *pro* that appears with an underspecified verbal agreement as in (12) or an uninflected verb as in (14), *Agree* should involve C intervention (i.e., C-to-T feature inheritance). With respect to *pro* in (22), it appears that there is no C intervention since the higher NP is overtly coindexed with the embedded *pro*. It should be noted that C intervention here necessitates topic intervention. This may include A'-topic or A-topic intervention. The former has been suggested for the appearance of *pro* as in (12) and (14). As for A-topic intervention, it requires an embedded *pro* to be coindexed with the NP of a matrix clause. This NP can be represented as a null topic at the left periphery of the embedded sentence since every

sentence has a topic (Lambrecht 1994). If pursued, the embedded T should be defective that needs C intervention as described so far. This is what I have assumed to be C-to-T feature inheritance in the context of *pro*-drop for sentences like (22). I continue to assume this framework for the derivation of *pro* in the sections that follow.

5.3.5. Null Subjects in SVCs

Another feature of pro-drop in Maybrat is its regular appearance in the serial verb constructions (SVCs). One of the common characteristics of SVCs is argument sharing (Aikhenvald 2006). By this, a series of verbs can assign a single θ-role to a pronoun. This suggests that two or three verbs in a sequence may or may not subcategorize an argument. Consider (23) with the structure similar to English control structure where *pro* appears before the serial verbs *m-amo* 'go' and *m-aret* 'pick-up.'

(23) a. *Linda*$_j$ *ø-sokuos au*$_i$ / pro$_i$ *m-amo m-aret popat*/

Linda ø-order 3U 3U-go 3U-pick.up vegetables

i. 'Linda$_i$ asks (her)$_i$ to gather some vegetables'

ii. *NOT* Linda asks her to go and gather some vegetables

b. **Linda sokuos au mamo au maret popat*

(ECT: MT – 11/09/2021)

It is typical for a control structure that an embedded pronoun should be coindexed with a matrix pronoun. In (23a) the subject *pro* is coindexed or controlled by the matrix object. The first and second verbs appear to share *pro* in a way that it is the agent of the two events. It should be noted that, in Maybrat, each verb of the serial is an independent verb that takes an argument. Having said so, one may argue for a possible projection of

another *pro* in between the strings of an SVC. First of all, the verbs *m-amo* and *m-aret* forms a *contiguous* string (Aikhenvald 2006:37) such that it cannot be interrupted by a grammatical element which is ungrammatical as seen in (23b) (provided that a single intonation is construed). Nevertheless, this does not mean that when the string is split by a pause break, the meaning changes. The construal of (23ai) or (23aii) does not change the basic meaning of the sentence, as found in most SVCs with motion verbs in Maybrat (Dol, 2007). The difference is in the grammatical function and the event structure. Serial verbs (23i) construct a single event whereas construction (23ii) has two events that are coordinated. These are expressed in the two grammatical functions. Taking (23i) into account, the second clause, *maret popat* 'gather vegetables,' may function as a complement clause denoting the purpose or result.

Larson (1991) argues that most SVCs can be conceived as *resultative secondary predicate* construction in English. Larson (1991:203-205) demonstrates that the resultative/purposive construction in Sranan, a Caribbean creole shown in (24), can be represented as (25) in English.

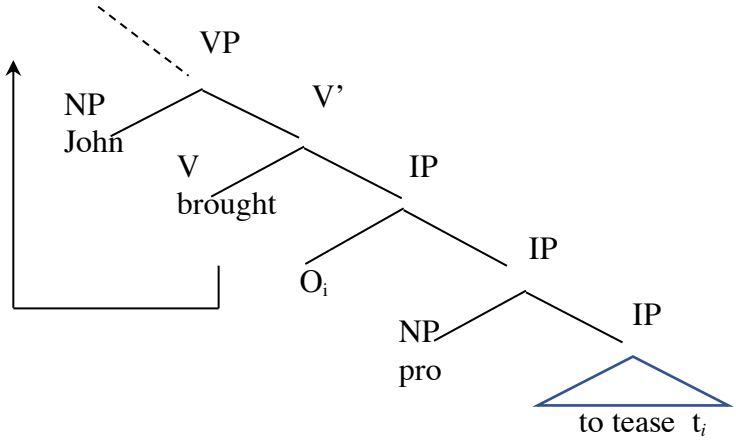
(24) *Kofi naki Amba kiri*

Kofi hit Amba kill

'Kofi struck Amba dead.'

(25) a. Mary [VP brought John to tease]

b.



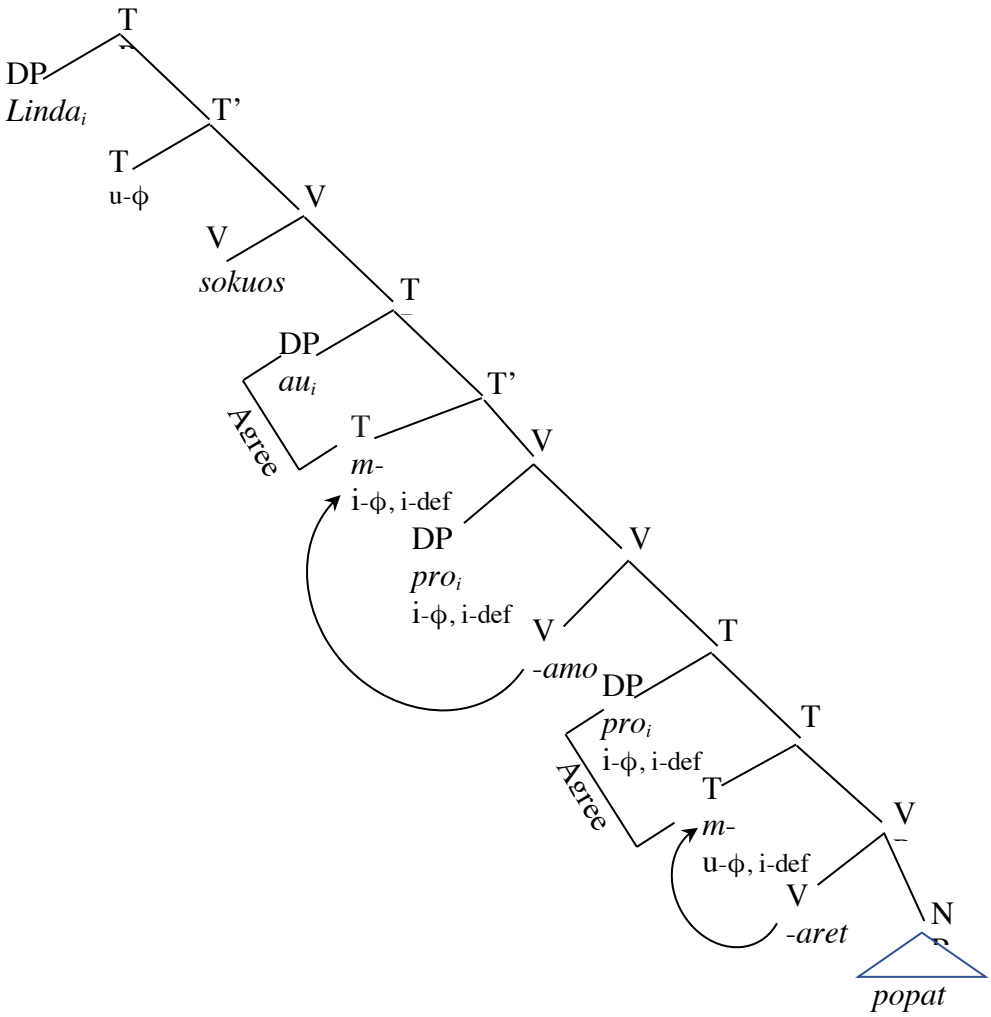
Although it can be said that a direct relationship may not be made between Larson's illustration of English sentence (25) for Sranan and (23) in Maybrat, it can be perceived that (23) has the same underlying meaning: X causes Y to do something. The sentence in Maybrat can have the meaning: Linda causes somebody to gather vegetables. However, a problem may arise for the fact that Sranan is an analytic language and Maybrat an agglutinative one in relation to the functional head projections. I have assumed, following Dol (2007), that all verbs in Maybrat have person markers, some are covert and others overt. Given that, Maybrat may display the projection of a strong functional head T. I suggest that the projection of SVCs as in (23) in Maybrat may involve extended TP projections.

Having described the syntactic nature of the SVCs, I propose the following derivation of *pro* in the serial constructions. Following Speas (2006), since the first verb (V1) and the second verb (V2) have ϕ-agreement heads, they may project two separate functional heads. Thus, *pro* originates in the Spec of V1 *m-amo* 'go'and V2 *m-aret* 'pick-up' as a weak *pro*(noun) with interpretable ϕ-features and an unvalued D-feature.

Note that the matrix object pronoun (*au* 'she') has the underspecified ϕ-features and agrees partially with the verbs. Although the matrix object can be coindexed with *pro*, T may be assumed as defective and may not be able to probe for *pro* for lacking D-feature. As such, although *pro* is coindexed with the matrix NP *au* 'she', it needs to take a discourse entity as its antecedent as well. I continue to assume that there is a null topic at the left periphery that is coindexed with the matrix NP.

Following Miyagawa (2010), the topic feature (i.e., D-feature) is transmitted to the functional head T through which it is enabled to carry out an *Agree*(ment) relation with *pro*. *Agree* proceeds as *pro* values the uninterpretable ϕ-features of T while T values the uninterpretable D-feature of *pro*. Subsequently, *pro* may be raised covertly to Spec-TP to satisfy SVO structure followed by the roots to T to satisfy the verbal morphological requirement. The derivation of *pro* in (23a) is represented in (26).

(26) *Linda sokuos* au_i /*pro*$_i$ *m-amo m-aret* *popat*/
Linda ø-order 3U 3U-go 3U-pick.up vegetables
'Linda$_i$ asks (her)$_i$ to gather some vegetables'



In the embedded clause of (26), there are two TP projections with two *pros* in view of theta projection. Although the verbs in the SVCs are independent in a way that they can assign their own θ-roles, it may be unacceptable if the same projections continue to the functional structure (TP). As seen in (23b), it appears to be ungrammatical. I suggest that such *pro* is base-generated in the external θ-position of each verb. The first

and the second functional heads of V1 and V2 agree with *pros* within their c-commanding domains. Once the *Agree* operation is completed, each *pro* may move to the respective Spec-TP to satisfy the strict SVO order. In this context, I assume that *pro* is obligatory in the SVC construction because their interpretation is bound by the matrix object *au* 'she'. It is assumed to be coindexed with an extra-linguistic entity (a topic NP) for being underspecified.

5.3.6. Summary

In this section I have provided an analysis of null subjects in Maybrat. The distribution of null subjects in Maybrat seems to promote several licensing and identification conditions. In general, the 1st and 2nd person pronouns as well as the 3rd singular masculine pronouns that are dropped can be recovered by the verbal agreement markers. Yet, it does not follow that such an inflectional head is the only licensing condition for the null subjects. The null subjects also appear in the clauses with the uninflected verbs. I have assumed, following Dol (2007), that the uninflected verbs actually have covert person markers that are comparable to Sigurðsson's (2011) ϕ-silent head. However, the silent head is not active in that they do not show overt grammatical relations with NPs. Thus, the functional head has to inherit ϕ-features and topic features from C so that T is active for a local *Agree* operation.

The same process applies to null subjects that appear in the clauses with the underspecified verbal agreement inflection. The underspecified verbal head promotes a partial agreement in which only the person feature can be identified. Having the underspecified verbal inflection puts the functional head T defective. This means T may

not be fully equipped with ϕ-features to license *pro* if rich agreement is accounted for. Thus, T needs to inherit the features from C to be active as a probe. I have proposed *pro* which appears in this context to be considered a pronominal variable. On the one hand it is a pronoun with the pronominal feature of person. On the other hand, its full interpretation requires A'-topic binding. This kind of *pro* indicates the combination of morphological agreement and discourse topic as the licensing and identification conditions.

5.4. Analysis of the Null Objects

It may be fair to say that generative accounts on pro-drop so far have been centered around null subjects. This may be due to the fact that more languages have subject-verb agreement than object-verb agreement (Dryer 2013). It may suggest that there are more languages that drop subjects than objects. As a result, there have been more accounts proposed for conditions that license the appearance of null subjects than null objects.

In the previous section, I have shown that the *Agree* operation can be performed in a local domain (i.e., Spec-head) since T in certain contexts are strong to enter into the operation. In addition, although in other contexts T appears to be deficient for the same purpose, C-to-T feature inheritance can maintain the regular *Agree* operation to work. When it comes to the null objects, applying the same framework would be too stipulative since Maybrat does not have object-verb agreement. It is predictable that the functional head *v* is inactive to host the uninterpretable ϕ-features. In the absence of object

agreement, it should be obvious that the functional head cannot participate in a normal *Agree* relation.

I continue to assume that a null object is a weak *pro* with an unvalued feature that needs to be valued by C. I propose that the feature is a topic feature which I have regarded as D-feature in the sense that the feature provides a definite interpretation to the object *pro*. Under this assumption, only C values the uninterpretable D-feature of object *pro, which* is a one-way *Agree* operation. This satisfies the minimal condition for an *Agree* operation. Chomsky (2000; 2001) notes that either probe or goal needs to have unvalued features in order to be active for an *Agree* operation. Since Maybrat lacks a Case system, the conventional *Agree* where a functional head values the Case feature of *pro* is irrelevant. I suggest that the one-way *Agree* is a minimal *Agree* operation. Thus, C transfers topic features (including D-feature) to the object *pro*. Once valued, it becomes definite and remains unpronounced in the VP internal position.

In general, null objects in Maybrat appear in the sentences shown in (27-30). The null object in (29) appears in a simple sentence preceded by an uninflected verb. Sentences (28) through (30) demonstrate the null objects that appear in complex sentences. Sentences (29-30), in particular, have null objects that appear in serial verb constructions (SVCs). For ease of exposition, I discuss the conditions that license their appearance in two subsections: null objects in regular sentences and null objects in SVCs.

(27) *fri* pro *oah*.
1S-meet already
'(she) already meet (them/her/him/it).'
(ECT: ET-10/30/2021)

(28) *Joni*$_i$ *y-awe iis* *Linda*$_j$ *m-kai* pro$_k$ *to m-ato amah*

Joni 3SM-say yesterday Linda 3U-find Loc 3U-Loc house

'Joni said Linda found (him/her/them/it) inside the house yesterday'

(ECT: ET-10/30/2021)

(29) *Rae m-eno* pro$_i$ *m$_i$-atak*.

Man 3U-do 3U-angry

'People made (her) angry.'

(ECT: MT-10/28/2021)

(30) *Fire au$_i$ ø-skoh farkor / pro$_j$ p-etu* pro$_i$ *m-ama /*

If 3U ø-like school, 3P-call 3U-come

"If she$_i$ likes to go to school, (we$_j$) call (her$_i$) to come".

(ECT: ET-10/30/2021)

5.4.1. Object *Pro* in Regular Sentences

Huang (1984) proposes that null objects in languages like Chinese are bound by null topics because of the lack of verbal agreement. Chinese and Maybrat do not have an object-verb agreement. So, it can be predicted that this claim may hold true for the null objects in Maybrat. Consider first (29) above. This clause has an uninflected verb without a subject and object. Without a morphological inflection, this single clause may be unacceptable if the context is not properly established. Now, consider (31). If there is a previous discourse for (27), the appearance of the null object in this context is grammatical.

(31) A: *n-ahe fnia ro Beni y-som fe a*

2S-see woman REL Beni 3M-play Neg INT

'Did you see the woman who Beni is dating?'

B: *tuo t-ahe* pro *oah*

1S 1S-see already

'I already saw (her).'

Now consider (28) with a similar question as in (32). Likewise, the appearance of the null object is grammatical when the previous discourse has been established.

(32) A: *Linda m-he Alex oh a*

Linda 3U-see 3U already INT

'Did Linda see him?'

B: *Joni y-awe au m-he* pro *is*

Joni 3S-say 3U 3U-see already

'Joni said she saw (him) yesterday.'

Both examples show that the appearance of the null objects have to be related to a previous discourse context. I assume with Huang (1984) that there is a null topic which binds the presence of the null objects. However, I suggest that the topic (overt or null) is not motivated by a movement or topicalization. The topic is base-generated in the topic position outside the sentences' domains (A'-topic). As shown in the b-forms of (33) and (34), the topic NPs can be reintroduced at the left periphery of the sentences.

(33) a. *Alex$_i$ f-o / au ø-fri* pro$_i$ *oh*

Alex similar.to-U 3U ø-meet already

'This Alex, she already met (him).'

b. Alex$_i$f-o / au fri ait$_i$ oh

(34) a. *Alex$_i$ t-o / Joni yawe au mhe* pro$_i$ *is*

Alex near-U Joni 3S-say 3U 3U-see yesterday

'That Alex, Joni said that she saw (him) yesterday.'

b. *Alex$_i$, Joni yawe au mhe ait$_i$ is* (ECT: ET – 11/27/2021)

Turning to (27) and (28), it can be said that the null objects share a common interpretation. That is, they have arbitrary interpretations. In other words, their specific ϕ-features cannot be recovered by linguistic contexts either by grammatical agreement or the presence of linguistic antecedents. Given that, their appearance has to be motivated by rich discourse contexts in which the speaker and the hearer are participating. Provided that a given discourse context is rich enough to recover the objects' identities, the speakers would omit the objects. Under Principle C (a variable should be free from any syntactic binding conditions), it can be assumed that the null objects can be variables. They are bound by topics that are covertly present in the discourse.

Since the extent to which a null object is a variable has been much debated (e.g., Huang 1984; Raposo 1986; Aoun & Li 2008), it is necessary to pursue it further using Huang's (1984) DJR and GCJ Principles in (16). It should be obvious that the null object in (27) has no closest nominal forms that are coindexed with it. Since the verb *ø-fri* 'meet' is uninflected, the null object cannot be recovered by the verb alone as in the case

of the null subjects in (21). Its interpretation has to be linked to a discourse entity. As for (28), *pro* appears in the embedded clause. Under DJR, the null object seems to be a pronominal since it is free from a local binding relation. In fact, there is no single NP that is coindexed with it. Although there are two nominal elements (Linda and Joni), none of them are coreferential with the object *pro*. This indicates that GCR principle, too, cannot be maintained for the pronominal status of the null object.

What this test suggests so far is that the referents for null objects in sentences like (27) and (28) can only be recovered by discourse context. Thus, both null objects in the two examples can be considered variables. Nevertheless, this test does not lead one to determine whether an object can be null or not. Siewierska (2004) states that the binding theory (including GCR and DJR) is concerned with the distribution of nominal categories, not the conditions pertaining to which pronominal form is used: null or overt. That said, I now turn to the conditions that may promote the appearance of null objects.

I have indicated earlier that there should be non-linguistic entities that specify the semantic contents of the null objects. I also have assumed, following Huang (1984), that the null object either in (27) or (28) should be coindexed with a null topic at the left periphery of the sentence. However, I differ from Huang in that the null topic is not a left-dislocated (movement) topic, but a base-generated one that binds the interpretation of the null objects. One contributing factor is that it can be resumed by a pronoun as seen in (33b) and (34b). In that sense, when they are null, they may mark the topic continuation, which is in line with Frascarelli's (2007:721) *topic criterion*. It states, "when continuous, [Aboutness] topic can be null (i.e., silent)." Although Frascarelli's study is concentrated

on null subjects in Italian, I assume that the notion of topic continuity and pro-drop can be applied in explaining such null objects as well.

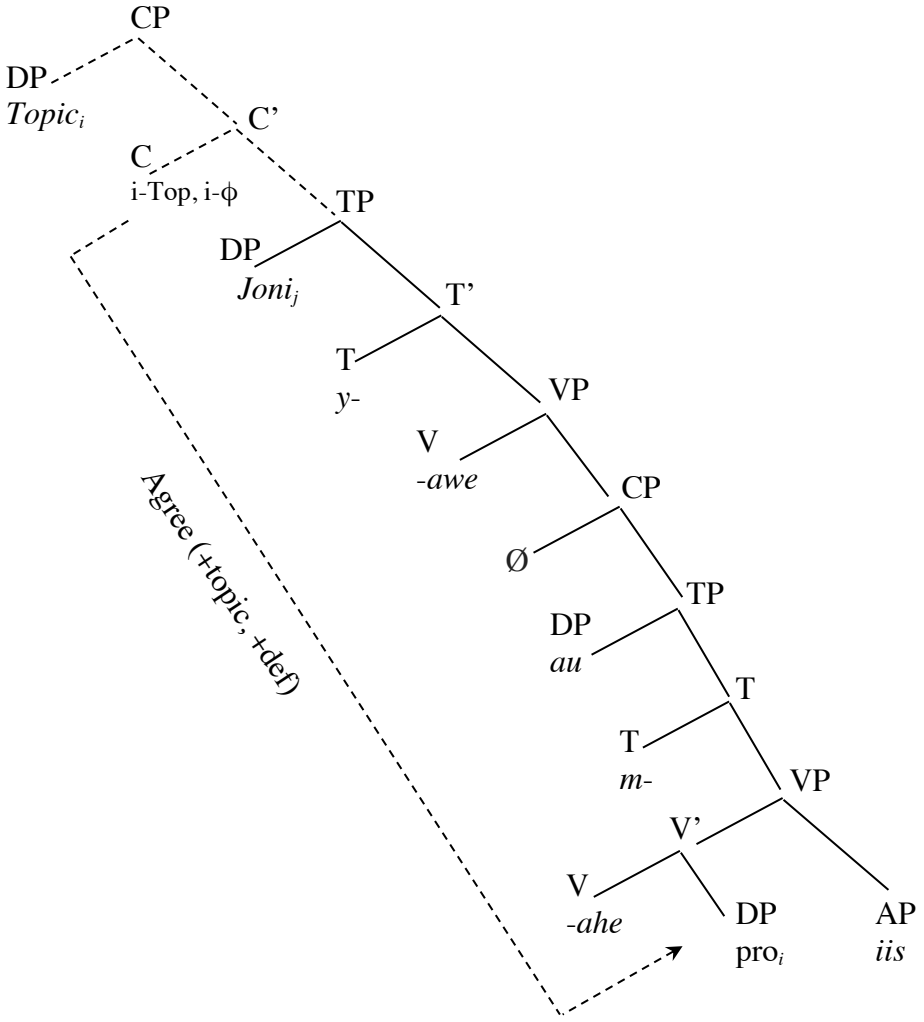
Therefore, it can be assumed that the object is not pronounced since it refers to the previous null topic that is the *Aboutness topic* (Frascarelli 2007:697). It is fair to suggest that the null topic has ϕ-features, following Chomsky's (2001:2) claims on C as ϕ-complete. One of the features is D-feature which enables *pro* to be coreferential with an entity in linguistic or non-linguistic context. Since the intermediate functional head in question is *v* and it is inactive for having no object agreement, C provides the features to *pro* in VP internal position directly. When the transmission of features takes place, it involves the topic features (+Aboutness, +D-feature).

It can be assumed that A's question in (31) or (32) provides the Aboutness topic (i.e., *fnia* or Alex). Once the coindexing relation between *pro* and the topic is established, the features (+Aboutness, +D-feature) are transmitted or copied into the empty object position. Consequently, *pro* becomes definite and remains unpronounced in VP internal position. The fact that *pro* remains unpronounced after receiving D-feature is borne out in Maybrat. If context is not properly established, the object *pro* would receive phonetic form to prevent unintelligibility (Dol 2007). So, it is expected that Speaker B's response in (31) and (32) would have the full pronoun (e.g., *Joni yawe au mahe* ***ait*** *iis* 'Joni said that she saw him yesterday'). The derivation of the object *pro* discussed so far is sketched in (35).

(35) *Joni y-awe au m-he* pro_i *iis*

Joni 3SM-say 3U 3U-see yesterday

'Joni said she saw (him/her/them/it) yesterday'



Notice, however, that there is a difference in the interpretation when the null object is replaced by the overt one. Consider (32) repeated here as (36a) with the null object and (36b) with the overt one. The overt pronoun *ait* can refer to either the matrix subject Joni or an entity outside the sentence. This makes (36a) different from (36b) in that the latter may be grammatical in out of the blue context while the former is not.

(36) a. *Joni*$_i$ *yawe au mahe* pro$_{i*/j}$ *is*

'Joni said she saw (him) yesterday.'

b. *Joni*$_i$ *yawe au mahe ait*$_{i/j}$ *is*

'Joni said she saw him yesterday.'

In this section I have shown that the null objects in simple sentences as in (27) and in matrix sentences as in (28) are instances of variables. Their interpretation is bound by the presence of a null topic in A'-position. The discourse provides the valued features (+Aboutnes, +D-feature) to *pro*. By means of the transmission, the features are copied into the empty object position through the minimal *Agree* operation.

5.4.2. Null Objects in SVCs

In this section I demonstrate that the null objects that appear in SVCs share the same licensing conditions as the appearance of the null subjects in SVCs. One common factor that contributes to the licensing condition is argument sharing. Consider (29) where *pro* appears in between the verb *m-no* 'do' and the second verb *m-atak* 'angry', represented here as (37).

(37) a. *rae m-no* pro$_i$ *m*$_i$*-atak*.

man 3U-do 3U-angry

'People made (her) angry.'

b. *rae*$_j$ *m-no* pro$_i$ / *mati* pro$_i$ *m-atak*

Man 3U-do and.then 3U-angry

'People made (her) angry.'

As has been described, Maybrat speakers use SVCs to express coordinate and subordinate functions. Sentence (37) has causative construction that can be marked by an intonation break to indicate a coordinate and a subordinate structure. Dol (2007) notes that this does not change the essential meaning (i.e., X does something to Y and Y is angry). For ease of exposition, (37b) has been marked with a slash to indicate the intonation break. Since (37) has the same underlying structure, it is predictable that each verb would project a separate θ-role at the base-generation in accordance with the theta criterion (Chomsky 1981:36). In (37), the first verb *m-no* 'do' is a transitive verb so it would project an internal θ-position for a theme. The second verb *m-atak* 'be angry' is an adjectival verb that needs an experiencer. It would project an external θ-position even though in other contexts the same verb can take an object (e.g., Fai matak ait 'the woman was angry at/scolded him). If this *pro* receives the phonetic form, it is predicted that only one is realized which, on the surface, both verbs seem to share the same argument. Projecting the base-generated θ-roles to the PF representation would be ungrammatical, unless a conjunction is inserted as seen in (37b). In fact, this strategy is not common as observed by some of the consultants. Given that, the object *pro* is both the theme and experiencer of two events that are built on each other. The following sketches the projection of the proposed θ-positions.

(38) $[_{TP}$ *rae* $[_{VP1}$ *meno* $pro_{(theme)i}$ $[_{VP2}$ $pro_{(experiencer)i}$ $[_{V}$ *matak*$]]]]$

Before moving on to the licensing conditions of *pro* in (37), it is important to determine the status of *pro* in this context. Taking Huang's DJR and GCR principles into consideration, it can be seen that the object *pro* of the first verb *m-no* is coindexed with the subject *pro* (experiencer) of the second verb *m-atak*. This seems to satisfy DJR

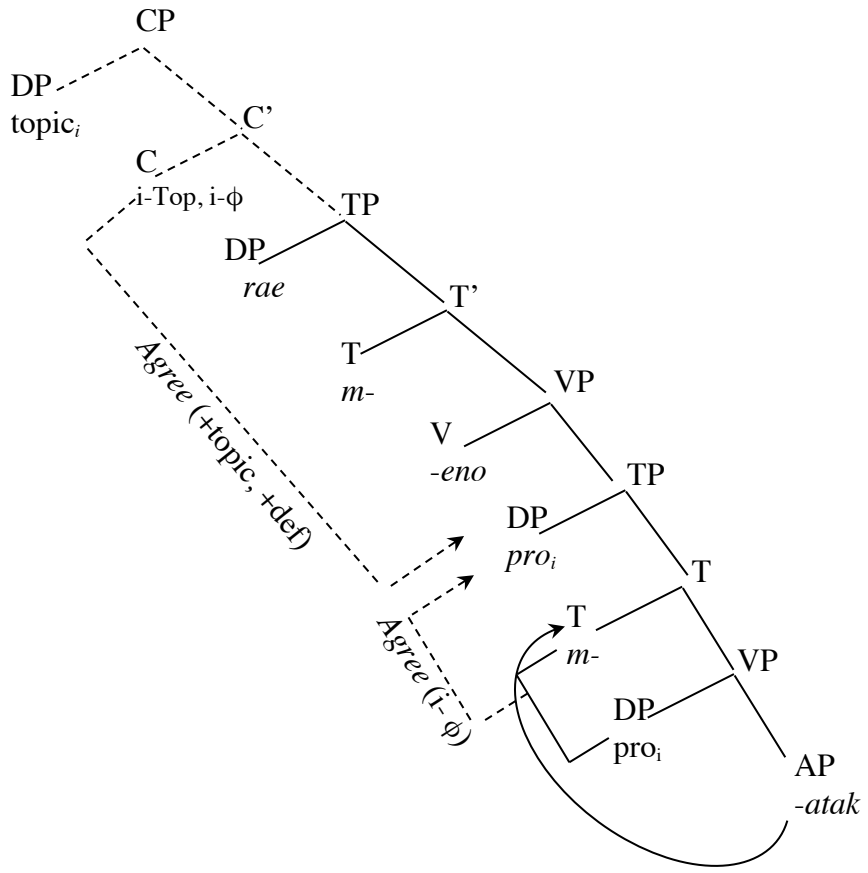
(Principle B) which necessitates *pro* to disjoint from the local governing domain. In fact, although both *pros* appear to be coindexed with each other, their referents cannot be specified since they are not coindexed with the higher NP *rae* 'man'. In other words, there is no linguistic antecedent that binds their interpretation. So, the object *pro* has to refer to a discourse entity. Huang (1984) notes that, under GCR Principle, a pronominal marker counts as the closest nominal element that an empty pronominal can be coindexed with. Bearing in mind the SVC *m-eno* 'do' and *m-atak* 'get angry,' it is apparent that the second verb has the same pronominal agreement marker *m-* as the first verb. I assume that since the object *pro* is coindexed with the subject *pro*, the agreement between the subject *pro* and the second *pro* identifies the content of the object *pro* indirectly. In that case, the null object can then be analyzed as a pronoun by such ϕ-feature matching.

However, this leads to another problem. The referent of the object *pro* is not fully identified with the underspecified marker *m-*. The marker only identifies the person, but not the number or gender feature. I have assumed that there is an empty topic position base-generated at the left periphery of a sentence. In this context, the topic is linked to the object *pro*. Given that, such a pro can be considered a pronominal variable for having two conditions. It agrees in the 3rd person feature and, at the same time, it is coindexed with A'-topic where it gets the definite interpretation (by inheriting the rest of the ϕ-features). The topic from the previous discourse along with the features (+Aboutness, +D-feature) are transmitted or copied into the slot as a silent topic. With the silent topic, the minimal *Agree* operates at a distance between C and *pro* in the VP internal position. The functional head C, having the valued features, values the uninterpretable features of *pro*. The object *pro* becomes definite and remains unpronounced in the VP internal position to

satisfy the rigid SVO order. Note that once the object *pro* becomes definite, so does the second *pro* because they are coindexed to each other, at least in the underlying structure.

Building on Larson's (1991:201) *secondary predicate* structures of SVCs, the following is the representation of sentence (37).

(39) *rae m-no* pro *m-atak*
man 3U-do 3U-angry
'People made (her) angry.'



From the analysis presented so far, discourse context seems to play an important role in the licensing and identification of null objects. Once *pro* is coindexed with a topic (overt or null) and receives the definite feature through an *Agree* operation, it is omitted. Although Maybrat lacks the object-verb agreement, the presence of the second inflected

verb in the serial constructions rescues the person feature in an unconventional *Agree* operation. This may suggest that syntax contributes in part to the recovery of *pro*. The silent topic is represented by the omission of the object via SVCs. In Lambrecht's (1994:127) terms, this illustrates the relation between the *topic referents* and their representation through the *topic expressions*.

So far, I have presented the sentences in Maybrat where a *pro* that appears in an SVC is linked to a silent topic. Now, consider (30) above, repeated here as (40).

(40) *Fire au$_i$ ø-skoh ø-farkor pro$_j$ p-tu* pro$_i$ *m-ama*

If 3U ø-like ø-learn 3P-call 3U-come

"If she$_i$ likes to go to school, (we$_j$) call (her$_i$) to come".

Sentence (40) is a conditional sentence with two *pros* in the subordinate clause. *Pro* in question is in between the serial verbs *ptu* 'call' and *mamo* 'go.' This particular *pro* appears in a position identical to that in (37) which denotes argument sharing. It is the object of the first verb and the subject of the second verb. The two verbs should project their own θ-position at the base-generation. Since the underlying structure of *pro* in (40) is identical to (37), I assume that *pro* in this context is base-generated in the theta position.

Sentence (40) has an overt NP in the previous clause that is coindexed with the object *pro*. Considering Huang's DJR and GCR principle, the object *pro* is free from a local binding because it is coindexed with the NP (*au* 'she') in the previous clause. Thus, it may satisfy DJR Principle (Principle B). However, it may not satisfy GCR at the same time because there is no closest NP that is coindexed with it. Since GCR also involves verbal pronominal markers, it can be said that the null object is coindexed with the

pronominal marker of the second verb. Nevertheless, this may violate the c-commanding relation since the null pronoun should be c-commanded by or coindexed with an immediate higher NP binder (i.e., *au* 'she').

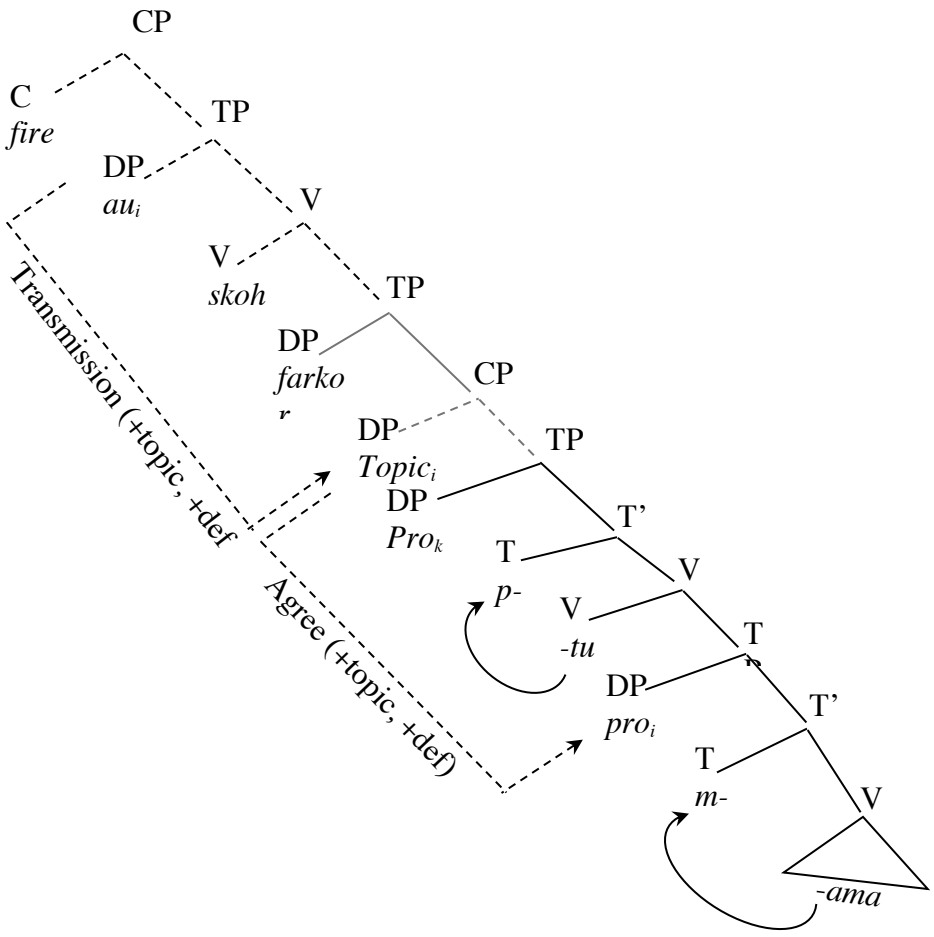
Building on Lambrecht (1994) that every sentence has a topic, I assume that the NP in the previous clause provides the topic for *pro* in the second clause. This topic may be represented as a null topic at the left periphery of the second clause that binds the null object in A-position which, in this context, is present at the left periphery of the second clause. Since this sentence involves an SVC like (37), I assume that the *pro* is also a pronominal variable since there is a person agreement. However, it needs to be coreferential with A'-topic to have full/definite interpretation.

The minimal *Agree* operation may proceed as follows. Assuming that the subject of the previous clause is the topic (i.e., *au*), it is copied into the empty topic position of the second clause with the valued topic features (+Aboutness, +D-feature). The silent topic is linked to the object *pro* in the second clause and values its uninterpretable features. Once valued, the object *pro* remains in the VP with the valued features (i.e., definite). The respective root verbs in the second clause may move and join the respective inflectional head T to satisfy the morphological requirement. This process is represented in (41).

(41) *fi-re* *au*$_i$ *ø-skoh* *ø-farkor* *pro*$_j$ *p-tu* *pro*$_i$ *m-ama*

similar.to-PART 3U ø-like ø-learn 3P-call 3U-come

"If she$_i$ likes to go to school, (we$_j$) call (her$_i$) to come."



I have shown that even a sequence of verbs may not successfully identify the content of *pro* unconventionally. It has to do with the type of the semantic features of the pronouns. While the third singular masculine pronoun (*ait* 'he') has the full ϕ-features (i.e., person, number, gender), the third singular feminine pronoun (*au* 'she') has the partial ϕ-features (i.e., 3rd person). The features may contribute to the identification of *pro* in an SVC. Consider (37) and (40), repeated here as (42) and (43) with the third singular masculine pronominal features.

(42) *Rae m-eno* pro ***y****-atak*

Man 3U-do 3U-angry

'People made (her/them/it) angry.'/'People made

(43) *Fire* ***ait***$_i$ *ø-skoh ø-farkor pro*$_j$ *p-etu* pro$_i$ ***y****-ama*

If 3U ø-like ø-learn 3P-call 3U-come

"If she$_i$ likes to go to school, (we$_j$) call (her$_i$) to come".

As can be seen, the contents of the null objects seem to be identified in the same way as the appearance of *pro* in (37) and (40). However, (42) and (43) are different from (37) and (40) in that the second verbs can identify the contents of the object indirectly through the full ϕ-agreement features. In that sense, it is plausible to say that the inflectional head alone can identify the ϕ-features of the *pro* without recourse to the discourse contexts. Since the object *pro* is also the subject of the second verb, once the second verb agrees with its subject *pro*, it also agrees with the object *pro* of the first verb. This shows that the C-to-T feature transmission proposed for the appearance of the null objects as in (27) may not be applicable in this context. For ease of exposition, the proposed indirect *Agree* relation is shown in the following representation for (44).

(44) [$_{TP}$ *Rae*$_i$ [$_{VP}$ *m-eno* [$_{TP}$ pro$_i$ [$_{VP}$ pro ***y-atak***]]]]

It is fair to assume that the appearance of the null objects in the sentences that involve SVCs appear to be licensed by discourse context and syntactic structure. It has been shown that the presence of the topics (A'-topic or A-topic) in the previous discourse or clauses contributes much to the licensing and interpretation of object pro-drop. This

can be conceived as resulting from the lack of object agreement in Maybrat. However, I suggest that relying heavily on such agreement-based perspectives on pro-drop may lead one to overlook pro-drop behavior in the non-agreement contexts. I have shown this in the analysis of the null subjects in Maybrat that appear with the uninflected and underspecified verbs, including the current analysis of the appearance of the null objects in SVCs.

This subsection has demonstrated that the appearance of the null objects in the SVCs displays a unique licensing and identification condition. However, since Maybrat also has uninflected verbs, such indirect licensing of *pro* may not be consistent. As far as I am concerned, an SVC that is composed of an inflected verb and uninflected verb is attested. For example, an SVC can have the motion verb *m-amo* '3U-go' and the action verb *saso* 'search' in the same contexts as shown in (42) or (43). I assume that the indirect local *Agree* relation that I have proposed here may not work in this context since the second verb is an uninflected verb which cannot provide such an indirect *Agree*. Hence, the licensing and identification of *pro* in this context should entirely be intervened by discourse context.

5.4.3. Summary

The analysis of null objects in Maybrat presents two facts. First, the appearance of the null objects is bound by available discourse contexts, provided that the contexts are rich enough to recover their identities. The analyses of sentences (27) and (28) have shown that by assuming a silent topic at the left periphery of any of the sentences, *pro*-drop may be licensed. Second, a pronominal argument is freely dropped when it appears

in between two verbs that are constructed as serial verbs. This may be due to the fact that verb serialization is a syntactic mechanism that compensates for the lack of grammatical marking for subordination and coordination. Although Maybrat lacks object-verb agreement, the verbal agreement inflection of the second verb may contribute to identifying the content of the missing objects, at least for verbs within the constructions shown in (42) and (43). As for the verbs with the underspecified pronominal marker *m-*, such indirect agreement does not hold for attaining the full interpretation of the missing objects. It has been shown that by linking to a previous topic (overt or null) *pro* can retrieve a definite interpretation which promotes it to be unrealized phonologically. In that case, I have proposed a minimal *Agree* by which the topic features (+Aboutness, +D-feature) are transferred directly from C to *pro* for the features' valuation.

The entire analyses of the null objects in Maybrat have shown that without grammatical agreement, discourse context appears as the dominant licensing and identifying condition for the appearance of null objects. Even so, I have shown that in certain contexts the content (ϕ-features) of an object *pro* can be identified through the serial verb constructions. I have demonstrated that null objects that appear in a sequence of verbs can be identified at least by person feature. Suffice it to say, although the licensing conditions for the null objects in Maybrat are dominated by discourse context, it is also true that certain syntactic constructions account for the identification of the null objects.

5.5. Discussion and Alternative Analysis

The analyses of the null subjects and null objects in the preceding sections have demonstrated that the appearance of null arguments may not be viewed mainly from the perspectives of agreement-based languages. So far, there are three properties that seem to influence the licensing and identification of *pro* in Maybrat: ϕ-agreement, syntactic binding, and discourse context/topic. However, it is important to note the fact that ϕ-feature agreement can not be held for pro-drop in many contexts. The previous sections have shown that discourse context may be the dominant condition for the appearance of the null arguments.

The fact that some verbs appear to have agreement inflections while others do not give rise to two perspectives on the appearance of the null subjects. From the perspective of *pro* that appears with the inflected verbs, Rizzi's head-licensing of *pro* seems to be feasible. However, it appears to work for the null subjects that include the 1st and 2nd person pronouns as well as the 3rd singular masculine pronouns. The content of the null subjects with the 3rd singular feminine pronouns cannot be identified properly because they are underspecified or neutral. Consider (9) and (12), repeated here as (45) and (46) for convenience.

(45) pro *y-efot* *ru* *sau*

3M-catch bird one

'(He) catches one bird'

(46) pro *m-ahe* *rae* *sepe*

3U-see man rifle

'(she) saw military personnel.'

As can be seen, the verb can agree fully with the 3rd singular masculine pronoun in (45), but can not with the 3rd singular feminine form in (46). This holds true for the appearance of null subjects in the clauses with the uninflected verbs as seen in (17), repeated here as (47). Having no inflection head does not prevent the subject position to be emptied.

(47) *pro ø-skoh ø-tawer aya*

ø-like ø-fishing.with.rod water

'(I/you/we/they/she/he) like fishing.'

This has an implication on the conditions that license the appearance of the null subjects. With regard to the null subjects that appear in the presence of the inflected verbs as in (45), the content of the null subjects can be recovered by the agreement heads. Accordingly, the *Agree* relation takes place in the local domain, maintaining the spec-head relation. When it comes to the verbs with the underspecified ϕ-agreement as in (46), the verbal head licensing cannot be successfully performed. I have proposed that the appearance of null subjects in this context can be dealt with by integrating Miyagawa's (2010) *Agree*-based analysis (i.e., Chomsky's C-to-T feature inheritance). Under Miyagawa's style, once a defective T is strengthened by C through the ϕ-complete feature inheritance, it can probe for a *pro* for an *Agree* operation. I have extended Miyagawa's proposal by suggesting that once T becomes ϕ-complete, it can license *pro* the way Rizzi's (1986) inflectional head licensing work.

As for the null subjects that appear with the uninflected verbs, the prevalent licensing condition seems to be reflecting the radical pro-drop behavior. Without any Agr heads, Rizzi's licensing condition is irrelevant in this context. I have suggested that under

the same C-to-T feature inheritance, T may be able to license *pro* and identify its ϕ-features. This seems to be speculative, but the empirical observation appears to support such an assumption. This is evinced by the fact that both inflected and uninflected verbs in Maybrat behave similarly in terms of subject droppings. Besides, previous studies by Dol (2007) have shown that there are morphophonological conditions that constrain the presence of pronominal markers in Maybrat. Dol (2007:52) suggests that all verbs in Maybrat are construed as having pronominal markers. Some are realized phonetically as *overt prefixes* whereas others are unrealized as *covert prefixes*.

The analysis of the null subjects proposed so far appear to follow the way the null subjects appear in different contexts. In other words, different contexts affect how licensing conditions for null subjects are analyzed. This may provide an array of analysis of the null subjects (i.e., non-uniform analyses) which may complicate how Maybrat is situated within the current pro-drop theories. Different analyses of a particular occurrence of *pro* is not uncommon as far as pro-drop theories are concerned. Scholars have continuously debated over the status of null subjects either cross-linguistically or within a specific language. For example, several syntacticians have differing views on the status of null subjects in non-agreement languages such as Chinese, Japanese, and Korean (e.g., Huang 1984; Aoun & Li 2008; Saito 2007; Kim 1999). Huang (1984) has been known for his analysis involving the presence of null topics in A'-position that binds the appearance of the null arguments in these languages. Nevertheless, Huang's account on the appearance of null subjects has received differing positions (e.g., Raposo 1986; Cole 1987; Modesto 2000; Holmberg, Nayudu, & Sheehan 2009).

It has been shown that Maybrat *pro*-drop behavior is distinct. One of which is the fact that the discrepancy in the morphological shapes and featural specification of Maybrat verbs does not prevent the appearance of the null subjects. What matters is the licensing conditions that may vary. Thus, an important question that can be raised is: would there be a unified explanation for the licensing and identification of null subjects in Maybrat?

I assume that it is plausible to have a unified analysis under certain postulations. First, assuming that Miyagawa's proposal is on the right track that ϕ-agreement features are universally hosted by C and can be inherited to T. Second, assuming that Dol's (2007) findings on the availability of the pronominal markers to all verbs in Maybrat is feasible in explaining the appearance of the null subjects. Each assumption has a direct theoretical implication. If the first assumption is taken, then both the null subjects and null objects can be licensed in a similar fashion, obviating the distinction between the agreement-based and agreement-less licensing conditions. If Dol's observation is considered, it can be perceived that all verbs in Maybrat have agreement markers. The fact that there are uninflected verbs may be irrelevant in the current pro-drop analysis. I suggest that putting forward Miyagawa's universal formal features has greater theoretical consequences for pro-drop theories than assuming all verbs in Maybrat are inflected. I simply assume that the latter may lessen the theoretical consequences by means of Dol's (2007) empirical evidence.

Nevertheless, I suggest that the two assumptions can be accommodated in the following way. Taking Dol's (2007) observation further confirms the presence of the functional head T in all Maybrat syntactic structures that host the ϕ-features. Given that,

Dol's observation can be put in parallel with Sigurðsson's (2011:269) proposal on the presence of *ϕ-silent/invisible* and *ϕ-overt/visible* in pro-drop languages. In that sense, it can be assumed that Maybrat has the default ϕ-features stored in the verbal functional head T. If such assumption is integrated into Chomsky's C-to-T feature inheritance, the ϕ-features should be derived from C. This suggests that Miyagawa's proposal may be a potential mechanism for a unified licensing condition for pro-drop in Maybrat that is built on Dol's observation.

Therefore, it is plausible to say that C-to-T feature inheritance is possible in Maybrat as long as it is necessary for feature valuation. Maybrat has three types of verbs in relation to ϕ-feature specification: the fully specified verbs, the underspecified verbs, and the uninflected verbs. I assume that the feature inheritance may well be applied to the second and third types. The first type has been assumed to have strong ϕ-agreement features that are not necessary to be included in the proposed framework. Taking the C-to-T feature inheritance into account, the underspecified ϕ-featural head as in (46) has a defective T whereas the uninflected verbs as in (47) has T with ϕ-silent feature. I continue to assume that there is an empty topic slot at the left periphery of sentences in Maybrat. The topic and the related features are copied into the slot for further C-to-T feature inheritance and *Agree* operation. (48) sketches the representation of the proposed framework.

(48) $[_{CP}$ Topic $[_{TP}[_{VP}]]]$ $[_{CP}$<null topic>$[_{C}[_{TP}$ <*pro*> $[_{T}[_{VP}$ <*pro*>$]]]]]$

Transmission

Agree (+topic, +def)

The derivation of *pro* under this framework proceeds as follows. At the base-generation, *pro* as a weak pronoun fills the θ-external position projected by a verb. T is projected with deficient/uninterpretable ϕ-features. The topic features (+Aboutness, +D-feature) are transmitted from the higher CP to the empty topic slot of a clause that has subject *pro*. Co-indexation takes place between the discourse topic and *pro* through the silent topic. Since T is active for *Agree* after inheriting the features, T probes for a goal (a weak *pro*). Once checked, *pro* values the uninterpretable ϕ-features of T and *pro* is valued for the topic features (+Aboutness, D-feature). *Pro* becomes definite and may move covertly to Spec TP (or remain in the θ-external position of *v*P) to satisfy the rigid SVO order of Maybrat. Building on this framework, the derivation of *pro* in sentences like (45) can be represented as the following.

(49) $[_{CP}$ Topic $[_{TP}$ $[_{VP....}]]]$ $[_{CP}$<Topic>$[_{C}$ $[_{TP}$ <*pro*> $[_{T}$ $[_{VP}$ *mhe* $[_{NP}$ *rae sepe*]]

Transmission *Agree* (+topic, +def)

In the case of null objects, the lack of object agreement may suggest discourse context as the only condition for the appearance of null objects. In fact, I have shown in Subsection 5.4.2 that when a null object appears in an SVC, there is a possibility that the syntactic structure provides an unconventional recoverability of the null objects. This suggests that discourse context may not be the single licensing condition for null objects in Maybrat. I also have suggested that a discourse context must be rich enough to be able to license the omission of the objects. Consider again (36a) shown here as (50). In this example, *pro* is not coindexed with the matrix subject but with a discourse antecedent. I have proposed a different view from Huang by suggesting that the null topic is not moved to the CP position but base-generated there.

(50) *Joni$_i$ y-awe au$_j$ m-he pro$_k$ iis*

Joni 3SM-say 3U 3U-see yesterday

'Joni say she see (him/her/them/it) yesterday'

(ECT: ET-10/30/2021)

I also have demonstrated that in other contexts, a null object can be identified by the overt presence of another NP that is coindexed with it, either in the previous clauses or as a topic in A'-position. Consider (37a) above with an overt topic in A's position for explanatory purposes and (40), represented here as (51) and (52).

(51) *(Beti$_i$), rae / m-eno* pro$_i$ *m-atak/*

B. man 3U-do 3U-angry

'(Beti), the people made (her) angry.'

(52) *Fire au$_i$ ø-skoh ø-farkor / pro$_j$ p-etu* pro$_i$ *m-ama /*

If 3U ø-like ø-learn 3P-call 3U-come

"If she$_i$ likes school, (we$_j$) call (her$_i$) to come".

I have assumed that the partial ϕ-agreement feature (person feature) of the verbs as in (51) may not fully recover the identity of the *pro*. To achieve the full interpretation, *pro* has to be bound by a discourse topic that is present either covertly or overtly at the left periphery of the sentence. I take this appearance of null objects further by integrating Frascarelli's (2007) Aboutness topic link into what I have been referring to as the minimal *Agree* operation. My reasoning behind this is motivated by the optimal derivation (Chomsky 1995:215 Ch 4) which requires any formal features to be interpretable before they are transferred to the *conceptual-intentional system* (LF) and *articulatory-perceptual system* (PF). Thus, discourse intervention is necessary when

linguistic conditions are not sufficient to license null objects. *Agree* needs to operate in the interface between discourse and syntax to ascertain the interpretability of the features prior to the transfer (Spell-out).

If the appearance of the null subjects in clauses with the uninflected verbs as in (14) above can be assumed to be identical to the appearance of the null objects, they can be subsumed under one circumstance. Both null subjects and objects appear in clauses without agreement heads. If so, I assume that the same principle of a unified licensing condition proposed for the null subjects above can also be applied to explain the derivation of the null objects.

However, as far as I know, the extent to which it is feasible has not been tested for the appearance of null objects, especially in discourse-prominent languages (e.g., Chinese, Japanese, Thai). The apparent reason is that when there is no object agreement, the lower functional head *v* is inactive to host ϕ-features to carry out a local Spec-head agreement. Sigurðsson (2011) offers an operation that suggests that discourse pro-drop languages like Chinese should establish an *Agree* relation directly between CP domain and *pro* due to the lack of C/edge link device (a node above TP and below CP that houses ϕ-agreement features). The distant *Agree* between C and *pro* has also been proposed by Frascarelli (2007). I assume that their postulations should include the inactive functional heads (*T, v*) in ϕ-agreement features. If it is correct, it is possible to say that a distant *Agree* can be managed from C to *pro* in the internal argument position. Nevertheless, bearing in mind the limited resources that have tested the authors' proposal for the appearance of null objects, I restrict myself to the assumption that the minimal *Agree* only involves one way feature valuation. The topic features (i.e., Aboutness, D-feature)

are transmitted to *pro* when linking (co-indexation) has been established. The following sketches the framework of the licensing condition for the null objects as in (40).

(53) [$_{CP}$[$_{TP}$ *au* [$_{VP}$ *skoh*….]]] [$_{CP}$<au>[$_{C}$ [$_{TP}$ <*pro*> [$_{T}$ [$_{VP}$ *ptu* pro [$_{VP}$ pro [$_{V}$ *mama*]]]]]]]

Transmission Agree (+topic, +def)

So far, the unified analysis proposed here seems feasible. In fact, there are some implications worth considering. One of which is that this analysis may suggest that all pro-drop languages can be treated in the same way in relation to *Agree* and pro-drop. Hence, I have considered the proposed analysis to be restricted to explain the licensing and identification of null arguments in Maybrat. This is because Maybrat has morphophonological constraints which denote the presence of agreement head for the uninflected verbs as far as Dol's (2007) study is concerned. As for the null objects, the *Agree*-based analysis is built on the postulation that, all things being equal, interpretability of formal features is necessary for an optimal derivation of a linguistic expression (Chomsky 1995; 2000). Thus, it is plausible to assume that certain features from the CP domain can be transferred directly to *pro* in a lower structure when it is necessary. Nevertheless, further stipulations and studies are needed for a better generalization.

5.6. Summary

In this chapter I have provided the analyses of the licensing and identification conditions of null arguments in Maybrat. The analyses have demonstrated that null arguments in Maybrat may be situated at the intersection between syntax and discourse. The appearance of null arguments is subject to several conditions. With respect to the

null subjects, the conditions include verbal inflectional agreement and discourse topic. The analysis shows that 1st and 2nd person pronouns as well as the 3rd singular masculine pronoun can be licensed by the verbal agreement heads. An interesting fact is that the 3rd singular feminine pronoun which has neutral ϕ-feature is dropped as freely as the other pronouns. Besides, all these null pronouns appear in any clauses with the uninflected verbs, including their appearance in the serial verb constructions. This suggests that verbal agreement may not be the single licensing condition for the null arguments.

As for the null objects, their appearance is mainly bound by discourse context or topic. Some evidence shows that null objects that appear in the embedded clauses cannot take matrix NPs as the antecedents and have to refer to entities outside the sentences. This is apparently common for not only the null objects that appear in the simple sentences, but also those that appear in the SVCs. Their distribution appears to provide a unique licensing condition of the null objects, especially when a serial verb expresses a causative/resultative structure. A null object of the first verb can be licensed indirectly by the second verb by means of the agreement with its subject. However, the identification of the null objects remains unspecified because of the defective ϕ-agreement features. C intervention is, thus, necessary to achieve the full interpretation. All these conditions indicate that objects are allowed to be null if a given discourse is rich enough to provide their specific/definite referents.

In an effort to provide a unified account for the appearance of the null subjects and null objects, I have proposed an alternative analysis. This is prompted by the fact that the appearance of null arguments in Maybrat have been motivated by a combination of two conditions. The null subjects and null objects are licensed by the interface between

discourse and syntactic conditions. This interface is directed toward the need to have all formal features (i.e., discourse and grammatical features) to be interpretable toward the full interpretation of a linguistic expression (Chomsky 1995; 2000). It has been shown that the *Agree* operation (Chomsky 2000; 2001) is the formal mechanism which ensures the interpretability of the features. Building on the *Agree*-based analysis of Miyagawa (2010) and Frascarelli (2007), I have offered an analysis which necessitates the transmission of discourse features either to T for a local *Agree* operation or directly to an object *pro* for a distant *Agree* relation. The unified analysis seems to have an implication to pro-drop theories. It suggests that all null arguments can be the product of feature checking. Nevertheless, it is necessary to note that any proposed frameworks put forward in the current study is limited to Maybrat due to its distinct *pro*-drop behavior.

CHAPTER 6

MAYBRAT AND OTHER PRO-DROP LANGUAGES

6.1. Introduction

The aim of this chapter is to review data on the types and distribution of pro-drop in Maybrat in order to situate it into the current pro-drop theories. The current pro-drop literature has classified pro-drop languages into three categories: consistent, partial, and radical null subject (NS) languages (e.g., Biberauer et.al. 2010; Holmberg 2005). The consistent NS languages (e.g., Italian and Spanish) are basically characterized by having rich agreement which is in sharp contrast with the radical NS languages (e.g., Chinese and Japanese) that lack agreement. The partial NS languages (e.g., Finnish & Brazilian Portuguese) are distinguished from the two types of NS languages for having restrictions on dropping the referential 3rd person pronouns.

Maybrat has types and distributions of null arguments that may be exclusive to these types of languages. Like in Italian, Spanish, or Finnish, verbs in Maybrat only agree with the subjects but not with the objects. In fact, not all verbs appear to have such agreement. Many verbs also are not inflected with agreement morphemes or appear as bare verbs. Of the total 498 verbs that Dol (2007:294) listed in the glossary, 47.18% are uninflected verbs. Moreover, not all the inflected verbs display full agreement. While the verbs can fully agree with the deictic pronouns (1st and 2nd person forms *tuo* 'I' and *nuo* 'you'), they agree partially with the 3rd person pronouns. Only the 3rd masculine pronoun (*ait* 'he') agrees in full ϕ-features with the verbs. The third feminine form (*au* 'she) is underspecified. The verbs only agree in person with the pronoun. Such partial agreement applies to other forms of NPs as well. Interestingly, these asymmetries do not prevent the

omission of the pronouns or NPs when they appear in subject positions. The same holds for the appearance of null objects. They are freely dropped when appropriate contexts are available. I have assumed, based on these facts, that the verbal agreement contributes less to the appearance of the null arguments. I have argued that the appearance of null arguments in Maybrat is dominated by discourse features rather than morphosyntactic ones. In that sense, Maybrat pro-drop behaviors show a great tendency toward the radical or discourse pro-drop languages.

In this chapter, I discuss in detail some features of Maybrat pro-drop compared to the other pro-drop languages discussed in the pro-drop literature to pursue the assumption I have put forward. This chapter has been divided into three main sections. Section 6.2 focuses on the appearance of null subjects in Maybrat. It highlights certain morphosyntactic features of null subjects in Maybrat compared to those of other pro-drop languages. It includes, but is not limited to, the types of agreement specification, verbal morphology, and the contexts in which discourse contributes to the appearance of pro. Section 6.3 concentrates on the appearance of the null objects. Similarly, this section highlights the contexts and constraints on the appearance of the null objects compared to other pro-drop languages. Section 6.4 summarizes the key features of null arguments in Maybrat from which a suggestion is offered on how Maybrat can be classified into the current pro-drop parameter. Section 6.5 concludes the chapter.

6.2. The Null Subjects

One of the major characteristics of the consistent NS languages like Italian is rich agreement paradigm (Biberauer et.al. 2010; Barbosa 2011a). A language is said to have rich agreement if it has distinct suffixes for different forms of pronouns (Roberts & Holmberg 2010). Maybrat seems to be comparable to the consistent NS languages in this respect. Consider (1) and (2) that show the verbal agreement inflections between Italian and Maybrat.

(1) Italian

(1S)	*bev-**o***	'I drink'	(1P)	bev-***iamo***
(2S)	*bev-**i***		(2P)	bev-***ete***
(3S)	*bev-**e***		(3P)	bev-***ono***

(Roberts & Holmberg 2010:6)

(2) Maybrat

(1S)	***t**-ata*	'I drink'	(1P)	***p**-ta*
(2S)	***n**-ata*		(2P)	***n**-ata*
(3S)	***y**-ata*		(3S/P)	***m**-ata*

As can be seen from (1), Italian has verbs that have different markers for different person and number features. In (2), Maybrat also has different agreement markers for different person and number features, except for the second person form. Apart from the pronominal marker for the second person form, it can be said that Maybrat has rich agreement as far as the agreement is marked for three person and two number features. After all, there has not been a clear definition on the richness of a verbal agreement paradigm and pro-drop, as far as I am concerned. In addition, like in Italian, each verb in Maybrat can function as a grammatical verbal clause without an overt subject (Dol 2007).

In turn, the agreement markers function as the subjects or arguments of the verbs (Borer 1986; Jelinek 1984; Alexiadou & Anagnostopoulou 1998).

Nevertheless, there is a difference between Maybrat and Italian in terms of ϕ-feature specification. Maybrat verbs do not agree in full features with the third-person pronouns. The verbs only have a distinct agreement inflection for the third singular masculine pronoun as shown in (2). The agreement marker *m-* as in *m-ata* 'she drinks' in (2) appears to be underspecified in which it only agrees in person with the third singular feminine pronoun *au* 'she.' It appears to be neutral since it also agrees with the third plural forms and other types of NPs. As a result, a subject NP (overt/null) can have an arbitrary interpretation which ranges from being singular/plural, human/non-human to being definite/indefinite. In fact, the asymmetry does not make any difference to the appearance of null subjects, which is contrary to what the rich agreement hypothesis suggests (e.g., Taraldsen 1980; Chomsky 1981; Rizzi 1986).

The second characteristic of a consistent NS is in terms of the strict interpretation of a null subject in a subordinate or embedded clause (Roberts & Holmberg 2010; Barbosa 2011). Consider the following sentences in Italian and European Portuguese, represented as (3) and (4), respectively.

(3) *Il professore$_i$ ha parlato dopo che (lui)$_i$ e arrivato.*

The professor has spoken after that (he) is arrived

'The professor spoke after he arrived.' (Roberts & Holmberg 2010:7)

(4) *[O João]$_i$ disse que [_]$_i$ comprou um computador.*

The João said that bought a computer

'John said that he bought a computer' (Barbosa 2011b:572)

Each example has a null subject in the second clause that is coindexed with the subject NP of the previous clause. The authors note that the subject can be dropped in this context if it takes the NP of the higher clause as the antecedent. If the subject is not repressed phonologically, its referents can be outside the sentences.

Now, consider (5) in Maybrat.

(5) *Izak$_i$ y-ekias y-awe* pro$_i$ *y-ame krau sau*

Izak 3M-tell 3M-say 3M-stab bandicoot one

'Izak said (he)$_i$ killed one bandicoot.'

As seen from the indexes, the null subject of the complement clause is coindexed with the NP of the higher clause. Similarly, the null subject cannot refer to entities outside the sentence other than the higher NP. However, when it is overtly expressed, it can refer to either the higher NP or a non-sentential entity. It can be said that the distribution and interpretation of the null subject in (5) reflects that of languages like Italian and European Portuguese as shown in (3) and (4).

The third aspect that characterizes the consistent NS languages is the presence of a null topic that binds the interpretation of a null subject. Holmberg (2010:96) exemplifies the topic-null subject relation in the following sentences in Italian, adopting Samek-Lodovici (1996).

(6) a. *Questa mattina, la mostra è stata visitata di Gianni. Pìu tardi *Ø/egli/lui*
This morning the exhibition was visited by Gianni. Later he/he
ha visitato l'università.
visited the university
'This morning the exhibition was visited by Gianni. Later he visited the university.'

b. *Questa mattina, Gianni ha visitato la mostra. Pìu tardi Ø ha visitato*
This morning Gianni visited the exhibition. Later visited
l'università.
the university.
'This morning Gianni visited the exhibition. Later (he) visited the university.'

Assuming with Samek-Lodovici (1996), Holmberg (2010) mentions that there is normally a topic base-generated in the local C domain of sentences like (6). This topic is an A-topic that is locally present in the previous clause and is copied into the left-periphery of the following clause as a null topic. The topic is linked to the null subject. In that way, the null subject is the representation of the topic under Frascarelli's (2007) topic-chain framework.

In Chapter 4 and 5, I have suggested that null subjects in Maybrat appearing in certain contexts may be construed as being linked to null A-topics at the left periphery of a clause. This is found especially in the contexts where the null subjects appear in complex sentences like (13) in Chapter 4, repeated here as (6).

(6) (Joni)$_i$ *saruk po mati* pro$_i$ *y$_i$-ari muniah m-atu*
ø-cook thing and.then 3S-hear rifle 3U-explode
'(Joni)$_i$ was cooking something when (he$_i$) heard the shooting'

It can be seen from (6) that *pro* in the subordinate clause is coindexed with the NP of the main clause. Assuming with Holmberg (2010) and Frascarelli (2007), the subject NP of the main clause can be represented as a null topic in the CP domain of the following clause which binds the null subject (see Chapter 5 for the LF representation of such A-topic). It should be noted that in its original version, (6) is presented without an overt subject NP in the main clause. If this is considered, the null subject should be bound by A'-topic, provided that the verbs do not agree or agree partially with *pro*, which I will discuss next as a distinctive feature of null subjects in Maybrat.

There are two properties in Maybrat that may be absent in the consistent NS languages like Italian and European Portuguese. First, as far as (6) is concerned, the main clause has a null subject that appears with the uninflected verb ø-*saruk* 'cook' whereas the subordinate clause has a subject *pro* with the inflected verb *y-ari* 'hear'. Since a null subject can appear in the main clauses like (6), such a *pro* may potentially be a variable because the verb is uninflected and requires topic binding. Second, the presence of the inflected verb *y-ari* 'hear' in the subordinate clause can recover the identity of the missing subject indirectly or through co-indexation. Put it differently, the inability of the uninflected verbal marker to recover the identity of the null subject of one clause can be 'rescued' by another verb in another clause that has the pronominal agreement inflection.

The second type of NS languages is the partial NS languages like Finnish and Hebrew. I assume that Maybrat displays less similarity to these languages regarding the appearance of the third referential null subject pronouns. The main characteristic of partial NS languages is that they normally allow 1st and 2nd person null subjects, but not

the thid person forms. Consider the following examples from Finnish (Holmberg 2005:539) and Hebrew (Gutman 2004:464-465).

(7) Finnish

a. *(Minä) puhun englantia.*
I speak-1SG English
'(I) speak English.'

b. *(Sinä) puhut englantia.*
You speak-2SG English
'(You) speak English.'

c. **(Han) puhuu englantia.*
He/she speak-3SG English
'(He) speak English.'

Hebrew

a. *pro nixshalti ba-mivxan be-historia.*
failed-1st-SG in-the-test in-history
'I failed the history test.'

b. *pro nixshalta ba-mivxan be-historia.*
failed-2nd-SG-M in-the-test in history
'(You) failed the history test.'

c. **pro nixshal/nixshela ba-mivxan be-historia.*
failed-3rd-M-SG/F-SG in-the-test in-history
'(He)/(She) failed the history test.'

As can be seen from (7), only the 1st and 2nd referential pronouns can be dropped in Finnish and Hebrew, compared to the c-examples which are unacceptable in simple clauses. Hebrew even has a further restriction in which the null subjects appear only in the past and future tenses (Vainikka & Levy 1999).

In contrast, Maybrat appears to have no restrictions in dropping the pronouns. Take, for example (2-4) in Chapter 4, repeated here as (8a-c).

(8) a. *Pro t-efot eru m-ana eyok*
1S-catch bird 3U-head two
'(I) caught two birds'

b. *pro n-ari po ro t-awe a*
2S-hear thing REL 1S-say Q
'Did (you) hear what I say?'

c. *pro y-asi y-sia rae m-siar*

3M-dance 3M-with men 3U-many

'(He) danced with many people'

As seen from (8), the subjects can be dropped regardless of the type of the pronouns. The free dropping of the subject pronouns also includes verbal clauses with the underspecified agreement discussed above. Other restrictions that include tenses cannot be extended to Maybrat because it does not have grammatical tense forms. This suggests that there is a free distribution of null subjects in Maybrat.

Another aspect that is distinct to the partial NS languages is that they normally allow impersonal null subject pronouns (Holmberg & Sheehan 2010). The authors note that the generic pronouns here are similar to the function of English-*one* in that it includes the speaker and hearer. According to Hofherr (2006) null subjects of this type have arbitrary interpretation (i.e., they do not have a specific referent or antecedent). Take, for example, the following examples in Finnish and Brazilian Portuguese as in (9) and (10), respectively.

(9) Kesällä heräät aikaisin

In-summer wake-PRS.3S early

'In the summer one wakes up early.'

(Holmberg, Nayudu, & Sheehan 2009:63)

(10) *É assim que faz o doce*

is thus that makes the sweet

'This is how one makes the dessert.'

(Holmberg & Sheehan 2010:128-129)

Maybrat pronominal system does not have generic pronouns of the type described for Finnish and BP. Although it does have the null generic forms, it has the exclusive ones which exclude the speaker and hearer, equivalent to English-*they*. In many contexts such null subjects are found through verbs with the underspecified marker *m-* which agree with the gender nouns such as *rae* 'man', *fnia* 'woman,' *ku* 'child'. Consider (50) in Chapter 4, repeated here as (11) and (12) with the overt subject NP for explanatory purposes.

(11) pro ø-*tutu* *fane ro* *m-amo* ø-*tewok* *amah ro* *Kaspar*

ø-chase pig REL 3U-go ø-enter house REL Kaspar

'(I/she/he/they/we) chased the pig (that) entered the house of Kaspar'

(12) *(rae)*$_i$ *m-no* *po* *f-o* *m-not* *ana* *syuk*

people 3U-do thing very.near-U 3U-think 3P alone

'People (who) make this thing should think about themselves carefully.'

(ECT: ET – 12/2/2021)

Sentence (11) has a null subject that appears with the uninflected verb ø-*tutu* 'chase.' Sentences like this can be grammatical if the referent has been mentioned previously or available in the discourse. The gender NPs such as *rae* 'man' in (12) and other NPs, have arbitrary meanings. They can be interpreted as singular/plural or definite/indefinite. In fact, the appearance of these pronouns in this context is similar to the consistent NS languages in which the null subjects have to be coreferential with a sentential or topic antecedent. In this context, the topic should be A'-topic, not A-topic as defined by Holmberg & Sheehan (2010) for Italian.

The third type of pro-drop languages in this respect is the radical NS languages. These languages are also known as discourse pro-drop languages (Neeleman and Szendrői 2007). They include languages like Chinese, Japanese, and Korean. One distinct feature of these *pro*-drop languages is the lack of agreement morphology. The pro-drop literature (notably Huang 1984) has noted that such lack of agreement motivates the dominant use of discourse context that triggers the omission of subjects. This is shown in the following examples in (13) and (14) for Chinese and Korean respectively.

(13) *e lai le*.

come ASP

'[He] is coming/came.' (Liu 2014:22)

(14) *John- Mary-eke [[pro Kathy-lul salanghan-ta] ko] hayssta*.

Nom Dat Acc love Comp said

'John told Mary that (he) loves Kathy.' (Kim 1992:27)

According to Liu (2014), following Huang (1984), sentences like (13) is grammatical only if it has a specific referent supplied by a discourse context. This is because the verb itself cannot identify the content of the null subject as far as grammatical agreement is concerned. What follows is that null subjects that appear in simple clauses like (13) would motivate variable interpretation (Chomsky 1981; Chomsky 1982; Huang 1984). In contrast, sentence (14) in Korean instantiates the context where null subjects can be identified without recourse to a discourse context/topic. The subject can be null if it refers to the subject of the higher clause. In other words, the matrix subject specifies the content of the subject of the lower clause. It

is similar to Maybrat and the consistent NS languages described previously. Null subjects with such syntactic appearance have been considered in the literature as pronouns.

Maybrat has a good number of uninflected verbs, and they can appear without subjects as well. Take for example the verbs ø-*saruk* 'cook' in (6) and ø-*tutu* 'chase' in (11) again. The omission of subjects in the sentences is unacceptable if it is not linked to a discourse context, especially in a single clause like (11). It can be said that the null subject in (6) is an exception in this regard. The content of the null subject that appears with the bare verb ø-*saruk* 'cook' can still be recovered by the pronominal marker of the subordinate clause verb. Apart from the null subjects like (6), this all suggests that Maybrat may be comparable to Chinese and Korean in terms of having bare verbs. A rich discourse context motivates the omission and recovery of the ϕ-features of the null subjects.

The same holds for the appearance of null subjects in clauses with the underspecified agreement. There is an asymmetry in the agreement specification for the 3rd person pronouns in Maybrat. While all the inflected verbs can agree in full phi-features with the 3rd masculine pronoun as in (8c), they agree only in person with the 3rd singular feminine pronoun, 3rd plural pronouns, and other forms of NPs. This is illustrated in the following example, repeated from (6) in Chapter 4.

(15) *pro*$_i$ *m*$_i$*-ahe* *ana*$_j$ *m*$_j$*-ama*

3U-see them 3U-come

'(she/it/they) saw them coming'

As (15) shows, only the person feature of the null subject can be recovered by the inflectional head. The same pronominal marker can refer to NPs as well as either singular/plural or definite/indefinite entities. In that case, (15) is acceptable insofar as a topic has been established previously that provides the specific/definite interpretation of the missing subject. In other words, the topic provides the number or gender feature that the underspecified pronominal marker (*m-*) lacks.

It is certainly different if the same null subject appears in a matrix sentence or complex sentence. It needs to be anteceded by an overt NP in the previous or higher clause to get the full interpretation. If there is no such linguistic antecedent, it needs to resort to a discourse context/topic. This is illustrated in the following matrix sentence.

(16) *(Maria)$_i$ m-kias m-awe* pro$_i$ *ø-saso ku r-au*

Maria 3U-tell 3U-say *ø*-search child POSS-3U

'Maria$_i$ said that (she$_i$) searched for her child'

(ECT: ET- 12/14/2021)

Sentence (16) has both the underspecified verb *m-kias* 'tell' and the uninflected verb ø-*saso* 'search.' This context is the reverse of (6) in which it is the complement clause that has a bare verb. Thus, the null subject in the lower clause has to take the matrix subject as its antecedent (if it is overtly present) to identify its content.

All Maybrat examples discussed so far suggest that the subjects of embedded clauses in Maybrat can be null if they have either linguistic or non-linguistic (discourse) antecedents. This is what is seen in the radical NS languages illustrated by the Chinese

and Korean examples above. The difference is that Maybrat may have another way to recover the identity of a null subject by means of the verbal morphology as shown in (6) or (11).

To sum up, null subjects in Maybrat appear in three general contexts. They appear in the clauses that have inflected verbs, uninflected verbs, and verbs with the underspecified agreement. While null subjects that appear with the inflected verbs can be identified by the agreement morphemes, their appearance with the latter types may involve discourse context due to being weak or defective in agreement. Maybrat pro-drop may reflect the consistent NS languages in terms of rich agreement. However, the fact that the null subjects also appear with the underspecified and uninflected verbs suggest that it may well be put on a par with the radical NS languages. Finally, it is necessary to say that most occurences of the null subjects may be due to the dominant intervention of discourse features.

6.3. The Null Objects

Since many of the languages discussed in the literature do not have object-verb agreement, the classification that is based on morphological agreement should be ruled out. Consequently, what appear to be the aspects that classify null object (NO) languages may be reduced to syntactic or discourse binding properties. Theories of null objects have shown that null objects can be interpreted as variables as suggested for their appearance in languages like Mandarin and Portuguese (e.g., Huang 1984; Raposo 1986; Cole 1987). They can be pronouns as argued by Cole (1987) for Imbabura or as pronominal variables as suggested by Modesto (2000) for Brazilian Portuguese and Cole (1987) for Thai and

Korean. In this section, I provide evidence to show that null objects in Maybrat can be associated with the three properties.

6.3.1. Variable

In the absence of object-verb agreement in Maybrat, it is fair to assume that the interpretation of the null objects should be managed by discourse context. Accordingly, it is expected that any appearance of the null objects would be interpreted as a variable. Chomsky (1981:330) defines it as follows: 'α is a variable if and only if it is locally A'-bound and in an A-position'. Consider (24) in Chapter 4, repeated here as (17).

(17) Speaker A: pro *n-ahar* *ait*$_i$ *fe* *a?*
2S-know 3M NEG Q
'Do you know him?'
Speaker B: *pro* *t-ahar* *pro*$_i$
1S-know
'I know him' (ECT: FT-Fall 2020)

In (17), the null object is grammatical as long as it is coreferential with a discourse entity. The null object takes the DP *ait* 'he' mentioned in the previous discourse as the topic antecedent. I have assumed, following Huang (1984), that the topic is represented as a null topic at the left periphery of Speaker B's utterance which binds the null object. In that case, the null object can be assumed as a topic-bound variable in the sense of Chomsky (1981).

In addition to (17), null objects in Maybrat can appear in a complement clause, but there is a constraint on its interpretation. They cannot take matrix subjects or objects as the antecedents as shown by Cole (1987) in Imbabura, Korean, or Thai. To illustrate this, compare the following examples between Imbabura, and Chinese and Maybrat.

(18) *Juzi$_i$ nin Marya Ø$_i$ juyanata*. (Cole 1987:600)

Jose says Maria will love

'Jose$_i$ says that Maria will love [him$_i$].'

(19) **Zhangsan$_i$ xiwan [Lisi keyi kanjian e$_i$]*. (Huang 1984:538)

Zhangsan hope Lisi can see

'Zhangsan$_i$ hopes that Lisi can see [him$_i$].'

(20) **Joni$_i$ y-awe Maria skoh pro$_i$*

Joni 3S-say Maria ø-like

'Joni$_i$ said Maria likes [him$_i$] (ECT: ET – 11/5/2021)

As can be seen, Imbabura allows the null object to be coreferential with the subject of the higher clause (Juzi). In contrast, null objects in Maybrat and Chinese, with the same type of clauses, have to take discourse entities as the antecedents. According to Huang (1984), null objects in Chinese that appear in embedded clauses can be grammatical if they refer to entities outside sentences. As seen from sentences (19) and (20), it is ungrammatical if the null objects are coreferential with the matrix subjects. Subsequently, the null object in (18) can be interpreted as a pronominal (Cole 1987). The same interpretation does not hold for null objects in Chinese as in (19) and in Maybrat as in (20). They are appropriately interpreted as variables because their contents are only valued by or bound to the discourse topics.

Such variable status of the null objects can also be seen in the following Maybrat example repeated from (30) in Chapter 4.

(21) *Orie t-eme ana poknu m-amo tipuo m-atu awiah*$_i$
later 1S-mother they morning 3U-go immediately 3U-pull.out taro
pro *m-ama m-ese* pro$_i$ / *poknu m-eros m-aim pro*$_i$ /
3U-come 3U-place morning 3U-stand.up 3U-cook
(Awiah fo), pro m-wau pro$_i$ *m-nan pro*$_i$ *ø-samer*
Taro Loc.near-U 3U-roast and.then ø-done
(NRT: LT- 05/18/2021)

'Later, my mother would go directly in the morning to dig out taros. Then (she) came and placed (them). In the morning, (she) got up and roasted (them). Then (she) cooked them in ash and then (they) were done.'

Example (21) is a continuous speech in Maybrat. Once the object of the first sentence (*awiah* 'taro') is introduced, the objects of the next sentences are omitted. I have assumed that this is controlled by the presence of a null topic that appears in the left periphery of each verbal clause that follows. The evidence for the presence of the null topic can be seen from the way it is reintroduced overtly in the last sentence (*awiah fo* 'this taro').

According to Dol (2007), Maybrat topic construction normally involves the fronting of objects. I assume with Dol that the overt topic as in (21) can also be motivated by topicalization. The topic may have been moved from the object position of the verb *m-wau* 'cook.with.ash.' However, I have noted that in certain contexts, a similar topic construction can be construed as base-generated in A'-topic position. For example, if the

overt topic is considered a continuation of a previous topic in the sense of Frascarelli (2007), the topic may be base-generated in A'-position that binds the empty object positions.

6.3.2. Pronominal

In certain contexts, the appearance of null objects in Maybrat can be interpreted as pronominal instead of variable. One of the conditions is that it can appear in an island construction (e.g., Modesto 2000; Cole 1987; Kim 1992). This means the empty category is not the result of a movement but base-generated in the island domain. As noted by the authors, Brazilian Portuguese, Korean, and Thai are languages that allow null objects to appear in island structures.

Compare the appearance of null objects in the island structure of European Portuguese in (22) and that of Imbabura and Korean in (23) and (24), respectively.

(22) **Eu informei a policia da possibilidade de o Manel ter*
I said the police of the possibility of the manel had
guardado Ø no cofre da sala de jantar.
kept it in the safe of the dining room
'I informed the police of the possibility that Manel had kept Ø in the dining room safe.'

(Cole 1987:600)

(23) *Juan$_i$ yuyan [chay [Ø$_j$ pay-ta$_i$ / Ø$_i$ rijsishka] runa] mirkadu-pi kashka-ta.*
Juan thinks that he-acc knew man-acc market-in was-acc
'Juan$_i$ thinks that the (man)$_j$ who knows (him)$_i$ was in the market.'

(Cole 1987:602)

(24) *John-i [$_{AC}$ [$_{IP}$ Bill-i Ø yatanchin] pang-ese] woolko-iss-ess-ta.*

Nom Nom scold room-at cry-ING-past-decl

'John was crying in the room where Bill scolded (him).'

(Kim 1992:39)

As seen from (22) Portuguese does not allow the object to be unexpressed in the adjunct clause. In contrast, Imbabura, and Korean permit null objects to appear in the same structure. Like Cole (1987), Kim (1992) notes that extraction from an island like this is not possible because *pro* is outside the local domain of the matrix clause. In other words, the island is an extended (adjunct) clause that functions as a relative clause that modifies the NP *room* in (24). The authors suggest that since the null objects can appear independently in the island structures, they are considered null pronouns. It can be said that the empty object positions in (23) and (24) are base-generated or appear in-situ within the island structures. Note again that an empty object position that is construed as bound by a topic operator framework should be within a local binding domain.

Turning to Maybrat, although it does not allow referential null objects in embedded clauses, it does permit null objects in island structures. Consider (34b) from Chapter 4 that has an adverbial clause and a null object in it, repeated here as (25).

(25) *ku r-anu n-epe t-o n-kias po m-kah*

Child POSS-3P 2S-give.birth Loc.near-U 2S-tell thing 3U-with

mai r-anu trus trus m-ahar pro

sound POSS-2P continue continue 3U-know

'Your child (incl) who you raise you tell things in our language consistently so later they know (it).'

(NRT: LT- 05/18/2021)

In (25), *pro* appears as the object of the verb within the adverbial clause. It can be assumed that the null object is base-generated within the clause and is not the result of a movement which may be comparable to Imbabura (23) and Korean (24).

Another evidence for the pronominal status of null objects is suggested by scholars who have work related to the appearance of null objects in non-agreement languages like Japanese. Consider the following Japanese example provided by Şener and Takahashi (2010:79).

(26) *a*. *Taro-wa zibun-no hahaoya-o aisiteiru*

Taro-NOM self-GEN mother-ACC loves

'Lit. Taro loves self's mother.'

b. *Hanako-wa e nikundeiru*.

Hanako-TOP hates

'Lit. Hanako hates *e*.'

According to the authors an elided object in languages like Japanese can be considered a pronoun if it is referential. This means it has strict reading where it takes the object of the previous clause as the antecedent (Şener & Takahashi 2010: Tomioka 2003; Saito 2007). Şener & Takahashi (2010) mention that an elided object in sentences like (26) always receives ambiguous interpretation because the object is a full-fledged NP (*zibun-no* 'self-GEN).

Maybrat elliptical structures resemble those of the East Asian languages in the sense that the elision can select the object to be omitted, not the whole VP structure. This can be seen from structure (36) in Chapter 4, repeated here as (27).

(27) a. *Mesak$_i$ ø-peyak* *[$_{DP}$ wanefuk r-ait$_i$]*

Mesak ø-throw.away cloth POSS-3SM

b. *Reni ø-peyak* *[$_{DP}$ ~~wanefuk r-ait~~$_i$] iye*

Reni ø-throw.away too

'Mesak threw away his cloth. Reni threw away (his cloth) too'

(ECT: PY, MT, ET – 04/25/2021)

As shown by the LF representation in (27b), only the DP is selected to be omitted. In fact, such elision does not promote ambiguous interpretation. This is different from that in the Japanese example above which I assume to be related to the inherent generic meaning of the possessive form *zi-buno* 'self-GEN'. In the case of Maybrat, the strict interpretation of the elided object may be the only reading. Three respondents that were presented with this sentence unanimously responded that the elided object can only be interpreted as referring to the object of the previous sentence. Thus, sentence (27) can only be read: what Reni threw is Mesak's clothes. I assume that the strict reading can be explained by the fact that the NP (DP) has a possessive pronoun marker that functions as a determiner that agrees with the subject. When the full-fledged object *wanefuk r-ait* 'cloth POSS-3SM' is elided, it includes the inflected pronominal marker. This is predictable by the consultants' observation. They noted that if (27b) had a sloppy reading, the NP would have been modified by the possessive form *r-au* 'POSS-3U' which agrees with the subject *Reni*. It could be assumed, otherwise, that if the determiner is left out, the elided construction should have an arbitrary reading.

6.3.3. Pronominal Variable

Cinque (1990) notes that a *Wh*-movement that leaves a trace may not be assumed in certain contexts (e.g., topic construction) as variable since the topic may be base-generated in A'-position. Moreover, it can be resumed by a pronoun in A-position which may also be base-generated in-situ. Cinque suggests that the empty category under this construct may not be considered a pure variable but a pronominal variable (p.110).

Modesto (2000) provides evidence for this claim from Brazilian Portuguese (BP). Modesto argues that null objects in BP can be both a pronoun and a variable. The author provides the following example (from Modesto 2000:221).

(28) *(O Pedro$_1$) [$_{AgrP}$ a Maria$_2$ [$_{TP}$ x_2 convenceu pro$_1$ que [$_{AgrP}$ pro$_2$ [$_{TP}$ x_2 é boa*

(Pedro) Maria convinced (him) that (she) is a good

dançarina .

dancer-fem.

'Pedro, Maria convinced (him) that (she) is a good dancer.'

According to Modesto sentences like (28) have an empty pronoun that appears as the object of the matrix clause, and it is coreferential with the topic *Pedro*. Modesto suggests that such syntactic appearance of null objects can be considered a variable that receives a pronominal interpretation at LF. Modesto (2000:222) notes that the null object in the matrix clause remains in-situ since it is "shielded" by being coindexed with the topic in the CP domain.

Taking Cinque's pronominal variable into account, what Modesto suggests can be assumed as the presence of resumptive pronoun which is base-generated in the object position of the matrix clause. van Gelderen (2013) notes that a resumptive pronoun may

indicate that a topic is not resulted from a movement, but base-generated at the left periphery of a sentence. Building on such theories, the topic construction in Maybrat as in (29) (repeated from (31) in Chapter 4) can be considered a pronominal variable in a similar sense.

(29) *Pi Kaspar*$_i$ / *rae m-ai* pro$_i$ *y-atiet*

Father Kaspar men 3U-hit 3S-perish

"Mr. Kaspar, people beat (him) badly" (ECT: MT-08/28/2021)

As seen from (29), the topic NP *Pi Kaspar* is base-generated at the left periphery of the sentence. The sentence also has a null object that is base-generated in the VP internal position of the verb *mai* 'hit'. Like sentence (28) in Brazilian Portuguese, the null object is coreferential with the topic that is located in A'-position. As such, it can be assumed in the sense of Cinque (1990) that it is not a pure variable but a pronominal variable.

It is necessary to note that the null object in (29) appears in the serial verbs *m-ai* 'hit' and *y-atiet* 'perish'. I have noted in the previous chapter that null objects that appear in Maybrat SVCs can be interpreted as pronouns. I suggest that sentences like (29) is another context for the appearance of null pronominal variables. Its content is valued by the following inflected verb and A'-topic. This is clearly seen when such structure involves verbs that have the underspecified agreement marker *m-*. Consider sentence (28) in Chapter 4, repeated here as (30).

(30) *Fire (au)$_i$ ø-skoh ø-farkor pro$_j$ p-emo p-tu* pro$_i$ *m-ama*

If 3U ø-like ø-school 3P-go 3P-call 3U-come

"If she$_i$ likes to go to school, (we$_j$) call (her$_i$) to come."

In (30), the object *pro* appears as the object of the verb *p-tu* 'call.' Since the SVC functions as a control structure, the null object is also the subject of the verb *m-ama* 'come.' I have proposed that because *pro* here is the object of the first clause and the subject of the second clause, its content can be identified indirectly from the agreement marker of the verb of the second clause. A possible interpretation of the empty category is then a pronoun. In fact, since the marker is underspecified or indefinite for having only the person feature, it has to be coreferential with a topic to gain the full interpretation. Such a binding relation establishes a variable interpretation in the sense of Chomsky (1981). Thus, the empty category can be interpreted at LF as both pronominal and variable.

I have assumed that the pronominal variable status of null objects as in (30) may be different from what is proposed by Cinque (1990). Cinque's definition of a pronominal variable involves a combination of a base-generated A'-topic and the presence of a resumptive pronoun. I suggest that sentences like (30) in Maybrat is an additional context for identifying an empty object as a pronominal variable for two reasons. First, it appears in an SVC which provides the identification of *pro* by means of an indirect agreement. Put it differently, the agreement marker of the verb in the second clause can be the resumptive pronominal marker itself. Second, the nature of the 3rd singular feminine null pronoun (*au* 'she') as an underspecified form necessitates further identification which needs to be linked to a discourse topic.

In this section, I have provided evidence that the appearance of null objects in Maybrat can be viewed as variable, pronominal, or pronominal variables. The former can be considered the dominant interpretation of the null objects by the fact that Maybrat (including the other languages discussed so far) do not have object-verb agreement. As for the pronominal and pronominal variable statuses, I have assumed that they appear in specific syntactic contexts. Maybrat can be assumed to be comparable with Brazilian Portuguese, Imbabura Quechua, and Korean in this respect. However, the appearance of null objects in SVCs may be distinct from these languages as it involves a variable *pro* with [+pronominal] features which is part of the inherent agreement property. Considering discourse intervention in the interpretation of the null objects in many contexts, it can be said that discourse context is the dominant condition for the interpretation of null objects in Maybrat.

6.4. Discussion

The aim of this chapter is to highlight pro-drop features in Maybrat in comparison to other pro-drop languages. *Pro*-drop theories have mainly been based on languages that have subject-verb agreement whereas those concerning null objects receive less attention. This contributes to different ways of classifying pro-drop languages. While certain languages can be grouped together by means of morphological agreement, the same does not hold for null objects. For example, Chinese and European Portuguese are different in terms of agreement morphology under the current null subject parameter (Biberauer et al. 2010), but they can be grouped together for allowing only variable null objects (Cole 1987; Raposo 1986).

In the preceding sections I have shown that null subjects and null objects in Maybrat can appear in many contexts. In terms of the null subjects, they appear in the clauses that have inflected verbs, uninflected verbs, and verbs with the underspecified agreement. They also can appear in the subject positions of simple, matrix/main, and subordinate clauses. Besides, the types of null subjects include the deictic pronouns (1st and 2nd), referential pronouns, and other kinds of NPs. Like the null subjects, the null objects also appear in many contexts. This contributes to the interpretation of the null objects which can be associated with variables, pronouns, or pronominal variables. In what follows I argue that Maybrat can be put in parallel with the radical pro-drop languages in five major aspects.

First, Maybrat may not be put in parallel with the consistent NS languages in terms of rich agreement morphology. As shown in (2), the verbs have agreement marking for almost all types of pronouns. However, there is a mismatch in the agreement feature specification of the 3rd person pronouns. While the verbs show full phi-features (person, number, gender) agreement with the 3rd singular masculine pronoun, they disagree with the 3rd singular feminine form. It begs a question for the strength of Maybrat verbal agreement from the rich agreement perspective. How rich is being rich in agreement to allow *pro*-drop? Several authors have raised a similar question (e.g., Cole 2009; Hofherr 2006) concerning whether the person or number feature alone can be justified for allowing null subjects. It is obvious from Maybrat examples that rich agreement cannot be maintained.

Second, Maybrat also has a considerable number of uninflected verbs. The null arguments can appear in the clauses with the kinds of verbs as in (6), (11), and (16). In addition, as shown in the other examples, the types and distribution of null subjects that appear in these clauses are not different from the appearance of null subjects in clauses with the inflected verbs. The appearance of null subjects with this kind of verbs suggests that their appearance may not be motivated by the presence of pronominal markers as argued for the consistent NS languages under the current pro-drop theory. This indicates that a subject in Maybrat can be dropped regardless of whether there is an agreement or not.

Third, Maybrat seems to have no restrictions on dropping subject pronouns. The asymmetry between inflected and uninflected verbs and the underspecified agreement do not prevent subject omissions. This is different from languages like Finnish, Brazilian Portuguese, or Hebrew. The literature has described that these languages have rich agreement, but they do not drop the 3rd person pronouns freely. Hebrew even restricts the omission to only the present tense forms. Maybrat appears to be distinct from these languages. On the one hand it appears like the consistent NS languages with a rich agreement paradigm. On the other hand, it has null subjects that appear with the uninflected or underspecified verbs. Note also that the partial NS languages have the third-person null subjects, but it appears only when they are bound by matrix subjects (Holmberg 2010; Holmberg & Sheehan 2010). Embedded null subjects in Maybrat can appear regardless of the syntactic binding.

Fourth, as for the null objects, they also appear in many different contexts. This promotes the three interpretations of null objects (variable, pronoun, pronominal variable). In the light of Cole's (1987) typology, Maybrat seems to be comparable with Korean and Thai, as well as Brazilian Portuguese (Modesto 2000). Although most of the appearance of null objects in Maybrat can be associated with variables, their appearance in few syntactic contexts suggests pronominal function as shown in (25) and (27). In addition, Maybrat has null objects that appear in SVCs, and they appear to be both pronominal and variable. They are conditioned by the indirect agreement as described for the null objects in (29) and (30). It has been shown that such agreement is managed by coreference with NPs or entities in previous sentences or previous discourse (topic).

Finally, null subjects or null objects in Maybrat involve bare NPs which can be interpreted as singular/plural or definite/indefinite as in (11) and (12). The current pro-drop literature distinguishes the consistent and the partial NS languages by which the former always have definite third person null subjects whereas the latter the indefinite/generic ones (Holmberg & Sheehan 2010; Holmberg 2010). The partial NS languages like Finnish always drop subjects with impersonal or generic features (equivalent to English-*one*) as in (9) and (10). As shown in (11) and (12), Maybrat also allows generic NS, but they are the exclusive ones (identical to English-*they*). In fact, null subjects that appear in sentences like (11) in Maybrat can involve human and non-human referent with arbitrary plurality and definiteness. Note that this includes the null pronouns that appear with the underspecified verbs as in (15), including the bare NPs. It may be due to the fact that Maybrat does not have definite articles. Among the three types of pro-

drop languages, only the radical ones have been associated with having bare NPs and lacking definite articles (e.g., Tomioka 2003).

The aspects of Maybrat pro-drop highlighted so far can be summarized further into three main features. First, the asymmetry of the verbal morphology and agreement features appear to contribute less to the omission of null subjects (compared to the partial NS languages). This suggests that the appearance of the null arguments is motivated by topic antecedents (overt/null or syntactic/non-syntactic). Second, both subjects and objects can be dropped in many sentential contexts, including clauses with the inflected and uninflected verbs. Third, Maybrat has bare null NPs and underspecified null pronouns that normally receive arbitrary interpretations (overt/null). All these features reflect the properties of the radical pro-drop languages. I propose that Maybrat can be classified as a radical pro-drop language under the current pro-drop parameters.

6.5. Summary

This chapter aims to present data on *pro*-drop in Maybrat to classify it into the current pro-drop theory. Maybrat shares with other pro-drop languages in dropping subject and object pronouns (e.g., Italian, Finnish, Chinese). However, it appears to be distinct from these languages for being both agreement and non-agreement languages due to its morphosyntactic features. It has been shown that many of the conditions for the appearance and interpretation of null arguments have been due to significant intervention of discourse properties. This chapter concludes that Maybrat has *pro*-drop behaviors that correspond more to the radical *pro*-drop languages than the other types of pro-drop languages discussed in the current literature.

CHAPTER 7

CONCLUSION

This dissertation has focused on providing a minimalist account on the appearance of null subjects and null objects in Maybrat, a Papuan language in Indonesia. Since Perlmutter's (1971) observation of null subjects in some European languages, different generative approaches have been proposed. Initiated by Taraldsen (1980), some generative syntacticians have claimed that the appearance of null subjects in languages like Italian is determined by the richness of agreement paradigm (e.g., Chomsky 1981; 1982; Rizzi 1986; Jaeggli & Safir 1989; Alexiadou & Anagnostopoulou 1998; Platzack 2003). Languages like Italian can have null subjects because they have verbs that always agree in person and number or gender (ϕ-features) with the null subjects. In the spirit of government and binding theory, Rizzi further provided a recast of the rich agreement hypothesis with what is known as the licensing and identification conditions of *pro*. The approach posits that languages like Italian can drop subjects because the verbal agreement head (Agr head) licenses the structural position of *pro*. The head is a pronominal marker with ϕ-features that are identical with those of the missing subjects. Languages like English have poor agreement head (i.e., lacking ϕ-features) which prevents them from dropping subjects.

I have shown in Chapter 3 that while this theory perfectly predicts the appearance of null subjects in languages like Italian, it cannot be extended to languages like Chinese. It has been shown that finite verbs in these languages do not agree in person, number or gender and they regularly drop not only subjects but also objects. Huang (1984) argues that what seems to be the primary condition for the appearance of null arguments in these

languages is the rich discourse context. In that sense, a null subject or object can be regarded as deriving from the presence of a discourse topic. I have assumed with regard to the variation that the parametrization of pro-drop may grow wider as more languages are identified.

Nevertheless, I have discussed that since the Minimalist Program (MP) was introduced in early 1990s, parametrization of pro-drop languages on the basis of morphological shapes has been reduced to variation in formal features. Along with Chomsky's (2000; 2001) *Agree* framework, MP posits that some lexical items (e.g., functional head/Agr) come out from the lexicon with uninterpretable/unvalued whereas others (e.g., pronouns) are interpretable/valued with the formal features (e.g., ϕ-features). *Agree* is seen to be responsible in making sure that a derivation is optimal. Optimality is achieved if all lexical items are interpretable at LF and PF levels of representation. Since then, variation among pro-drop languages has been viewed as the variation of formal features of functional heads and *pro*(nouns) (Holmberg 2005; Miyagawa 2010; Sigurðsson 2011; Biberauer et.al. 2010). Languages like Italian are considered having interpretable ϕ-features in the functional head T (consistent pro-drop languages) whereas those like Chinese lacking the features in T (i.e., radical pro-drop languages). Other languages like Finnish, have been assumed to have weak ϕ-features on T (i.e., partial pro-drop languages). Accordingly, *Agree* operates locally between T and *pro* in languages like Italian and Finnish. In languages like Chinese, a distant *Agree* between C and *pro* takes place (e.g., Sigurðsson 2011; Holmberg 2005).

In this dissertation I have assumed that Maybrat has unique types and distribution of null subjects and null objects that cannot be easily associated with the current

parameters of pro-drop languages. In Chapter 4, I have shown that Maybrat has three distinct features of pro-drop. First, the subjects and objects are normally dropped in different kinds of sentence structures once topics have been established. Second, Maybrat has verbs that are either inflected or not inflected with agreement morphemes. In fact, not all of the inflected verbs have full ϕ-features (i.e., person, number, and gender). The agreement marker *m-* is underspecified (i.e., it agrees in person but not in number or gender feature). *Pro*-drop, however, is found in many clauses regardless of the types of the verbal morphology.

In Chapter 5, I have offered three conditions to account for the appearance of pro-drop in Maybrat. First, for null subjects that appear in clauses with verbal agreement markers, the pronominal markers can identify the ϕ-features of the null subjects. The appearance of null subjects in these clauses may reflect the consistent null subject languages. The agreement head has strong ϕ-features that may prevent the projection of Spec TP as posited by some authors (notably Alexiadou & Anagnostopoulou 1998). In this regard, a null pronominal subject is thus a DP pro(noun) in the sense of Holmberg (2005). Second, null subjects that appear in clauses with the uninflected verbs are conditioned by rich discourse context. The same holds for the appearance of the null objects. I have posited that the rich agreement hypothesis cannot be assumed in this respect. Bearing this in mind, the null subjects and null objects are adequately treated as variables in the sense of Chomsky (1981). This, however, does not exclude the fact that in specific structures (e.g., island or SVCs) they can be treated as pronouns. Third, when it comes to null subjects that appear in clauses with the underspecified agreement marker *m-*, there is an interface between morphosyntactic and discourse conditions. I have

suggested, following Cinque (1990) and Modesto (2000), that the null subjects are better associated with both pronominal and variable.

What follows is three contexts where *Agree* may operate. In terms of null subjects that appear with the inflected verbs, the functional agreement head has uninterpretable ϕ-features on T. T agrees with *pro* to value each other's uninterpretable features (ϕ-features and D-features). I have proposed, following Holmberg (2005), that once the *Agree* operation is completed, *pro* may move covertly to Spec TP. Yet, it is not to satisfy EPP features, but the rigid SVO orders of Maybrat which may reflect Rizzi (1986) licensing conditions. As for null subjects that appear in the clauses without verbal agreement, I follow Holmberg (2005) in proposing that *pro* is a weak pronoun that lacks D-feature. I suggest a long distance *Agree* between the functional head C and *pro* to gain the full interpretation. The null subjects and null objects inherit the topic features (ϕ-features, D-features) through co-indexation with the functional head C.

In the case of pro-drop in clauses with the underspecified agreement morphemes, I have posited that the functional head T is weak in ϕ-features and D-features. Building on C-to-T feature inheritance (Chomsky 2000; 2001; Miyagawa 2010), I have proposed that these features can be restored by inheriting them from C. Once inherited, T is enabled to perform a local *Agree* operation to maintain a minimal computation (e.g., subjacency/cyclicity). Thus, *pro* is valued by T for D-feature and T is valued for ϕ-features. Based on the description of the types and distribution of the null arguments along with the analysis of the conditions that promote their appearance, I have suggested in Chapter 6 that Maybrat may be adequately situated with the radical pro-drop languages.

This dissertation suggests that it is necessary to extend the generative quest on the pro-drop phenomenon to minority languages. It should be noted that like Maybrat, many Papuan languages are isolates (i.e., they cannot be classified easily into a single language group) that have posed challenges for the typological study (Evans & Klamer 2012; Foley 1986). Given that, extending the study to these languages may contribute to not only enriching the scope of pro-drop theories but also providing an academic domain for the minority languages to survive.

This dissertation has focused on the qualitative data on the types and distribution of null arguments in Maybrat. Based on the data, I have made some claims on the types of null arguments, their contexts, and the conditions that trigger their appearance. For example, the massive appearance of null subjects and null objects has indicated the strong contribution of discourse features. For future work, a quantitative analysis can be useful to support such a claim. For example, it may include finding the relationship between the types of verbs or clauses and the appearance of null arguments or finding the correlation between the null subjects and the null objects. Doing so offers a different insight into factors (i.e., variables) that contribute to the appearance of the null arguments in Maybrat and how they help classify languages like Maybrat into the pro-drop parameters.

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