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## The Syntax of Guaraní: A Pronominal Argument Analysis of a Noteworthy Indigenous Language

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**The Syntax of Guaraní: A Pronominal Argument Analysis of a Noteworthy Indigenous Language**

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Honors Senior Capstone  
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Under the Direction of Dr. Kristin Denham  
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## 1. Introduction

In this paper, I defend the position that Guaraní is a pronominal argument language. I consider prior literature and discussions of the word order of the language, yet explain why these analyses prove fruitless. In describing Guaraní syntax, I offer tree structures to more accurately depict the position of pronominal arguments in relation to the verb and other syntactic phrases.

Originally, I planned to further my analysis of the basic word order, headedness, movement, and the complementizer phrase (CP) in Guaraní; however, in taking the position that Guaraní is a pronominal argument language, I find that the idiosyncrasies in word order or headedness prove less relevant and interesting than previously thought. The Pronominal Argument Hypothesis (PAH), as applied to Straits Salish by Jelinek & Demers (1994), might be what unites the complexities in the language, such as noun incorporation and the argument structure of intransitive verbs.

Due to my relative inability to collect data, much of my work is a review of the literature on Guaraní morphology and syntax. I am reliant on previous works for data samples and correspondence with Lic. Ernesto Luis López Almada. I am thankful for the time he has taken to answer my questions about Paraguay and the Guaraní language. I recognize my place as an outsider and acknowledge that many of my sources are written by outsiders as well. I also recognize the importance of incorporating native speakers in further studies and assisting them in answering their questions rather than my own.

I would also like to acknowledge the endless support that Dr. Kristin Denham has given me in understanding syntactic theories and applying them to Guaraní. Without her guidance, this project would barely scratch the surface of Guaraní syntax.

## 2. Cultural/Historical/Geographic Information

Throughout this project, I examine the syntax of Paraguayan Guaraní, a South American language spoken in Paraguay and member of the Tupí-Guaraní family. While other dialects of Guaraní are spoken in Brazil, Bolivia, and the surrounding regions, I focus on only one dialect in this paper.

Guaraní is well known due to its co-official status as the national language of Paraguay, alongside Spanish. Some estimates show that there are nearly six million speakers of Paraguayan Guaraní. The language has been written on extensively from a phonological, morphological, and sociolinguistic standpoint, but it is only in recent years that more work has been done on the syntax and semantics of the language. The bilingual situation in Paraguay has captured the interest of many linguists. For various sociolinguistic and cultural reasons, this indigenous language remains widely spoken. In a study on language attitudes toward bilingualism in Paraguay, Dr. Shaw Gynan finds that Paraguayans "...who reject monolingualism in Guaraní do so for utilitarian reasons: Spanish is essential in the modern world. The equally strong rejection of monolingualism in Spanish (i.e. negative prestige) is due to very different

reasons: Guaraní is the authentic language of the Paraguayan people” (Gynan 1998 p. 56). In a paper on language attitudes and bilingualism in Paraguay, I described the noteworthy resilience of Guaraní in the context of the modern world. It’s strong position in Paraguayan society can be attributed to Paraguay’s geographic isolation and the work of missionaries throughout the seventeenth and eighteenth centuries (Ito 2012). Across the Rio de La Plata region, Jesuit and Franciscan missionaries established missions in which Guaraní was the official language (Ito 2012). They documented the language and created a written form, bringing this language that was so closely tied to the hearts and minds of the Guaraní people into the structural fabric of society. It wasn’t until the nineteenth century that language attitudes shifted. Carlos Antonio Lopez, a dictator who would later become the first Paraguayan president, labeled Guaraní a “useless barbaric language” (Ito 2012, p. 2). Under his leadership, the prestige and power afforded to Spanish shifted attitudes, but regardless of his claims, Guaraní remained a symbol of national identity.

For centuries, Guaraní has been spoken alongside Spanish. It’s likely that language contact with Spanish has influenced the syntax of Guaraní over time, but the description and analysis to follow will demonstrate that Guaraní remains distinct.

### **3. What a normal word order analysis suggests**

While a normal word order analysis describes the interesting characteristics of noun phrase placement, it does not provide an adequate explanation or analysis of the word order variations found in Guaraní. Colijn (2007) and Tonhauser and Colijn (2010) find a variety of factors influencing the placement of what they deem “arguments.” While I argue that these are adjuncts rather than arguments, I still find the patterns in their data fascinating.

Those who have described the basic word order of Guaraní generally agree that the language follows (S)VO (subject-verb-object) word order. This is consistent with my previous work on the syntax of Guaraní. There is a great deal of flexibility in the placement of noun phrases, with the exception of indirect objects. Colijn (2007) claims, “Grammatical function and discourse status affect the placement of arguments, while animacy by itself is not much of an influence. When paired together, however, discourse status and animacy do affect the realization of subjects in Paraguayan Guaraní” (p. 3). Colijn finds a tendency in intransitive subjects to occur pre-verbally while transitive subjects “differ from the intransitive in that there do not appear to be any real tendencies toward pre- or post-verbal realization...” (p. 34). In terms of object placement, she finds that objects have a strong tendency for post-verbal realization. Based on these findings, the word order is often described as VO due to the more flexible position of the subject.

Tonhauser and Colijn (2010) cite various factors that affect Guaraní word order, including discourse status, animacy, transitivity of the verb, and grammatical function (p. 256). This is in reference to the positions of full noun phrases. However, the data in their Guaraní corpus illustrates the use of cross-reference markers on the verb, rather than full noun phrases, functioning as agents or patients/recipients. If these cross-reference markers are in fact the arguments of the verb, it can be argued that “arguments need not be realized with a full noun

phrase (or an independent pronoun)” (Tonhauser and Colijn 2010 p. 258), and their optionality indicates the relevance of a pronominal argument analysis of the language.

#### 4. Overview of features that prevent a normal word order analysis

Facts about the morphology and semantics of Guaraní make a normal word order analysis of Guaraní challenging. While the focus of this paper is not the morphology or semantics of the language, they become relevant at times in my analysis of the sentence structure.

In terms of the morphology, Guaraní is mildly polysynthetic. This means that many of the words consist of multiple morphemes, generally inflectional affixes, that carry grammatical information. “Polysynthetic” is a broad term used to describe languages with sentence-like words. Consider the following example from Hamming (2010) in which two “words” convey the meaning of the entire sentence.

- (1) ‘Avakaamita kopyhareve’  
 A-vaka-ami-ta ko-pyhareve  
 1SG-cow-milk-FUT this-morning  
 ‘I’ll do some milking this morning’

The English sentence ‘I’ll do some milking’ is conveyed with a single, multimorphemic word in Guaraní.

The verbal morphology is particularly relevant to a syntactic analysis of Guaraní. The language has two classes of particles\* that attach to or precede the verb to mark person and number. Above, I used the gloss ‘1SG’ to label the particle that marks a first person singular subject; however, from now on, I will follow Colijn (2007), Tonhauser and Colijn (2010), and Tonhauser (2017) in labeling particles as either class A or B. The class A particles indicate the agent of transitive verbs and *some* intransitive verbs. I say *some* because Guaraní exemplifies split intransitivity\*. Within the category of intransitive verbs, class A particles generally attach to active verbs whereas class B particles are paired with stative verbs.

\*I use the terms particle and marker instead of affix to describe the morphemes that indicate person and number. This is because the first and second person class B particles do not attach to the verb.

\*Split-intransitivity will be detailed in section 7.2.1.

Table 1 includes an oversimplified version of the verb marking system. A more complex version can be found in the appendix. Number is not marked in the third person.

Table 1. Verbal Paradigm for Class A and B markers.

	A	B
1SG	a-	<b>che</b>
2SG	re-	<b>nde</b>
3	o-	i-
1PL.incl	ja/ña-	<b>ñande</b>
1PL.excl	ro-	<b>ore</b>
2PL	pe-	<b>pende</b>
3	o-	i-

The verb marking system is further complicated by considering the valence of transitive verbs. By definition, transitive verbs require two arguments, an agent and patient\*. The two arguments required by transitive verbs cannot both be referenced on the verb. The verb marking system of Guaraní only allows for one of the two. According to Hammink (2010), “transitive verbs are not always marked with overt morphology that references both arguments” (p. 7). Deciding whether to mark the agent or patient is dependent on a person hierarchy that will be detailed later. When used with transitive verbs, the class B particles reference the patient of the verb when the patient is more prominent in the person hierarchy. It is also common to find the class B particles with nouns to mark possession.

\*Other authors use the terms agent and patient interchangeably with subject and object respectively. While the distinction between subject and agent isn't crucial to this project, I will use agent and patient because these terms capture some interesting semantic differences.

The following examples exemplify the position of arguments in Guaraní and demonstrate the use of class A and class B markers in sentences of varying complexity. It'll become clear why a basic word order analysis cannot account for the variable surface positions in Guaraní.

In (2) and (3), the sentences appear to follow SVO word order. The agent is cross-referenced on the verb with the class A marker 'o-'. The patients are marked with '-pe.'

(2) Example from Tonhauser and Colijn (2010)

Juan o-hecha María-pe  
 Juan A.3-see María-PE\*  
 'Juan sees/saw Maria'

(3) Example from Gutman & Avanzati (2013)

Jagua o-juka mbarakaja-pe  
 Dog A.3-kill cat-PE  
 'The dog kills the cat'

\*Some authors gloss 'pe' as DO for direct object. I use PE to avoid labeling its status because its variable function is not within the scope of this paper.

In (4), the independent pronoun 'Che' appears to be optional, and the agent is instead marked on the verb with a class A particle. 'Petei' indicates that there is only one table. This sentence seems to be (S)VO.

- (4) Example from Velazquez (1989)  
 (Che) a-reko petei mesa  
 (I) A.1SG-have one table  
 'I have a table'

A language is assumed to have a single underlying word order. In the case of Guaraní, the underlying word order appears to be SVO, as in the examples above. Any surface variations in word order are achieved by moving the NP arguments and/or verb to other structural positions in the syntax. However, this movement must be motivated by topicalization, focus, or an alternative pragmatic explanation. Theoretical assumptions about word order are based on learnability, especially in child language acquisition. For children to learn the language, there must be one parameter setting for each feature/characteristic of the language from which all variation is derived. A normal word order analysis should be able to explain variations of this basic word order, but the structural flexibility in the examples to follow creates a need for alternative analyses.

Examples (5) and (6) demonstrate noun incorporation and non-incorporation respectively of the same noun. The noun 'hova' occurs between the agent marker and verb in (5) and in a separate noun phrase in (6).

- (5) Example 6b from Velazquez (1989)  
 Che ro- hova- hei  
 I A.1SG/B.2SG-face-wash  
 'I wash your face'
- (6) Example 6a from Velazquez (1989)  
 Che a-johei nde-rova.  
 I A.1SG-wash you-face  
 'I wash your face'

Example (5) includes a portmanteau morpheme\* that indicates a first person agent acts on a second person patient ('I' acts on 'you'). The word order becomes more difficult to describe. Information regarding the patient/object seems to be contained within the verb in (5), making the word order appear to be verb final.

The examples to follow exemplify the marking of the patient on the transitive verb with a class B marker. The agent is not cross-referenced in either example.

- (7) Example 14b from Tonhauser (2017, 203)

Lára che-guera tupa'ó-pe  
Lara B.1SG-bring church-pe  
'Lara brings me to church'

- (8) Example 9b from Tonhauser (2017)

Che-su'u chéve  
B.1SG-bite pron.NONAG.1SG  
'[She] bit me'

In (8), the agent is implicit. The patient is referenced on the verb with a class B marker and contained within a separate noun phrase.

Example (9) contains a causative structure that adds an additional component of the verb. The word order appears to be VSO, demonstrating a flexibility in the position of arguments that a normal word order analysis could only explain pragmatically.

- (9) Example 29a from Tonhauser and Colijn (2010)

O-mbo-kakuaa karai pe mita'í  
A3-CAUS-grow gentleman that child  
'The gentleman raised the child'

Examples 2-9 illustrate the word order variations that create a need for further analysis. The examples below demonstrate how states of being are expressed in Guaraní. Native speakers refer to these verbs as chendal verbs. They take class B markers as their agents in contrast to other intransitive verbs.

- (10) Example from Gynan and López Almada (2014)

Che-rasy  
B.1SG-sick  
'I am sick'

- (11) Example from Ernesto López (personal communication)

Kalo i-chuko-iterei  
Kalo B.3-elegant-very  
'Carlos is very elegant'

Examples (10) and (11) lead to further questions relating to argument structure and word order. In a later section, I introduce and describe the concepts of noun incorporation, split intransitivity,

and the lack of independent DPs to suggest the need for a pronominal argument analysis of Guaraní.

## 5. Overview of PAH

Simply put, the Pronominal Argument Hypothesis (PAH) claims that agreement markers are in reality arguments, NPs or DPs, and any other instances of NPs, AdvPs, or PPs are adjuncts. Elaborating on this definition, Hale (2003) claims, “In a language belonging to the PA type, the person-number morphology internal to a verb word represents the direct arguments of the verb. These elements are not agreement morphology. Instead they are the arguments, pure and simple” (p. 5). He clarifies that if a pronoun is explicitly stated, outside of the verbal morphology, it is an adjunct rather than an argument. The pronominal arguments, within the verb, carry the same meaning that a verb external pronoun would convey. For this reason, Jelinek and Demers (1994) refers to the verb internal arguments as pronouns.

Hale (2003) claims that there is no motivation for syntactic movement in PA languages. In my previous work on the syntax, I relied on movement to account for variations in the position of subject information. This assumption becomes untenable since there is so much variability in word order as shown in section 4 above. Movement to these positions is unmotivated. Therefore, the PAH could account for the structures that make a normal word order analysis that is reliant on movement problematic.

As stated previously, the PAH emphasizes that only pronominal affixes are found in argument positions. Based on Jelinek’s work, Figure 1a below illustrates the position of arguments under a PA analysis in a tree structure. It will be modified in a later section to accommodate Guaraní syntax.

Figure 1a. Structure of a verb in a pronominal argument language.

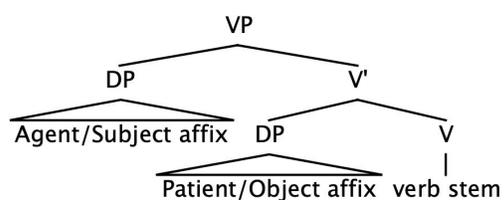
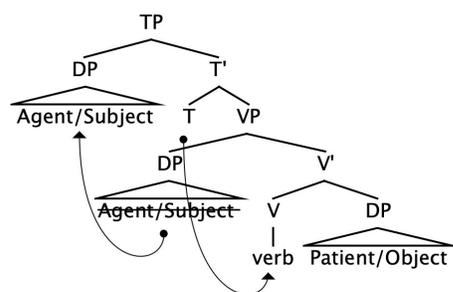


Figure 1b illustrates the structure of a non-PA language, in this case English, in which the arguments are independent phrases, not affixes. The subject moves out of the specifier of VP and into the specifier of TP, allowing for the realization of English SVO word order.

Figure 1b. Structure of a verb in a non-pronominal argument language (such as English).



The PAH is useful in its ability to offer explanations for variations in word order and the argument marking pattern of verbs. Hammink (2010) cites previous diagnostics for PA languages and offers clear pieces of evidence of PA that can be applied to Guaraní. Jelinek (2006) suggested that PA languages tend to exhibit: “the absence of pro-drop, case-marking differences between pronominal arguments and adjoined nominals, and the absence of determiner quantification” (p. 5). Building on these specifications, Hammink (2010) offers her own four pieces of evidence for PA: obligatory argument morphology on the verb, optional presence of independent DPs, phonologically null morphemes with fixed  $\phi$ -features rather than pro-type agreement, and adverbial, rather than determiner, quantification (p. 7). So, what does this all mean? How should these criteria be applied to Guaraní?

## 6. How the PAH applies to Guaraní

According to Hammink (2010), Guaraní has obligatory argument morphology, variable DP order, and unergative/unaccusative classes of intransitive verbs. These findings are evidence for a pronominal argument analysis of Guaraní. What this type of analysis looks like in relation to Guaraní will be detailed in this section and substantiated with examples.

### 6.1. Obligatory argument morphology on the verb

The first piece of evidence for PA, based on Hammink (2010), is obligatory argument morphology on the verb. Guaraní verbs do not appear without additional morphology marking the arguments of the verb. Agents and patients in Guaraní are coded on the verb by what Tonhauser (2017) calls cross-reference markers, sometimes called pronominal affixes, as shown in some of the examples above in 2-9. Only one argument may be cross-referenced on the verb, regardless of transitivity. Therefore, either an agent or patient is cross-referenced on a transitive verb but never both. Which argument is cross-referenced is determined by a person hierarchy. The person hierarchy ranks first person arguments (‘I’ or ‘me’) over second person arguments (‘you’) and second person arguments (‘you’) over third person arguments (‘she/he/they’ or ‘her/him/them’). Instead of calling these markers arguments, Tonhauser (2017) labels them ‘proto-agents’ and ‘proto-patients.’ In Tonhauser’s words, “Whether the proto-agent or the proto-patient argument is cross-referenced is determined by the person hierarchy... the

argument that is higher on the hierarchy is cross-referenced” (2017 p. 200). The following examples demonstrate the marking on the verb and the ungrammaticality of a verb without agent or patient marking.

I consider variations in argument morphology that produce grammatical sentences based on example (8). In examples (8b) and (8d), there is no argument marking on the verb, making the sentences ungrammatical.

(8) Example 9b from Tonhauser (2017)

Che-su'u chéve  
 B.1SG-bite pron.NONAG.1SG  
 '[She] bit me'

(8a) Che-su'u  
 B.1SG-bite  
 '[She] bit me'

(8b) \*su'u chéve  
 Bite pron.NONAG.1SG  
 '[She] bit me'

(8c) ai-su'u ichupe  
 A.1SG-bite pron.NONAG.3  
 'I bit her'

(8d) \*su'u ichupe  
 Bite pron.NONAG.3  
 'I bit her'

In an interview with Ernesto López, he considered the example in 12a, with no argument marking on the verb, ungrammatical and offered the correction in (12b). The independent pronoun 'Che' in (12b) is optional and cannot be the argument of the verb. The argument is instead 'a.' This exemplifies that argument morphology on the verb is required.

(12a) \*Che hai

(12b) (Che) a-hai

'I write'

In the following example, the patient of the sentence, 'child,' is found in an independent DP and marked by a class B particle that indicates possession. The patient precedes the verb, contradicting the assumed underlying word order of SVO. This demonstrates the flexibility of

structural positions. Furthermore, the verbs meaning ‘leave’ and ‘go’ are marked by a third person class A particle that references the implicit agent of the transitive verb, or ‘she.’ Third person arguments are often implicit according to Tonhauser (2017). Because the agent and patient are both third person, the person hierarchy does not influence the argument morphology. Example (13) clearly demonstrates the need for an alternative analysis and description of arguments.

- (13) Example 19 from Tonhauser and Colijn (2010):  
 I-memby o-heja ha o-ho mombyry  
 B3-child A3-leave and A3-go far  
 ‘She left her child and went far away’

I follow Hammink (2010) in arguing that argument morphology is obligatory on the verb. Hammink (2010) notes that the PAH in its current form doesn’t explain the different systems for marking arguments (split intransitivity), but this does not make a PA analysis of Guaraní problematic.

## 6.2. *Optional presence of independent DPs*

The goal in taking a PA approach is identifying the markers referenced above as the arguments of the verb rather than agreement markings. Furthermore, it becomes necessary to argue that any noun phrases outside of the verb are instead adjuncts. Tonhauser (2017) claims, “In Paraguayan Guaraní, cross-reference markers, independent pronouns and other noun phrases, as well as combinations thereof, may realize the arguments of the main predicate of a clause” (p. 1). In contrast, I argue that the arguments are realized on the verb and additional pronouns and noun phrases provide adjunct information. There are instances in which the verb functions as a complete clause with both agent and patient information. Instead of using affixes from both classes, the agent and patient may be marked on the verb with the reflexive marker, portmanteau morpheme, or with an incorporated noun.

In the examples to follow, I demonstrate the optionality of noun phrases and determiner phrases realized outside of the verb and claim that they are there for semantic or pragmatic reasons.

- (14a) Example 31e from Colijn (2007, 35)  
 Yvypora-pe rei-pytyvõ  
 mankind-PE A.2SG-help  
 ‘You help mankind’

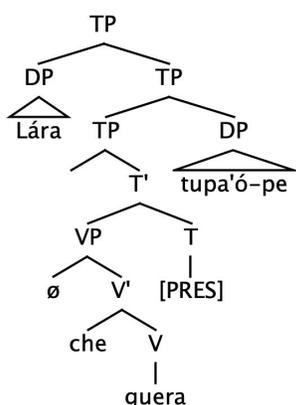
- (14b) ? Rei-pytyvo  
 A.2SG-help  
 ‘You help [them]’  
 \*Not verified by a native speaker.

Example 14b conveys the patient information found in 14a without an independent noun phrase. If the verb ‘help’ is an aireal\* verb in Guaraní, it’s possible that ‘them’ is cross-referenced in the verb through the reanalyzed form ‘rei-’ rather than ‘re.’ Hammink cites Jensen (1987) who suggests that proto-Guaraní contained the object marker -i or -y that was positioned between the agent particle and verb. This object marker was reanalyzed and incorporated into the marking on aireal verbs.

\*Native speakers seem to categorize verbs as areal, aireal, or chendal. These terms relate to the semantic basis of the verbs which determines the particles that they take. Aireal verbs use the class A particles but differ from areal verbs in that the particle is followed by the phoneme /i/. This /i/ is thought to be a historical remnant of an object marker in Guaraní. The distinction between areal and aireal verbs is outside of the scope of this paper, but more information can be found in the appendix.

Substantiating the claim that independent determiner phrases are optional, Tonhauer writes, “The previous literature on Paraguayan Guaraní has noted that the language allows for certain arguments to be realized only with cross-reference markers or even to be (what I call) implicit” (2017 p. 196). This is strong evidence that these markers are arguments rather than DPs. The relatively free DP order is additional evidence that DPs are not in argument positions (A-positions) and are instead structurally adjoined. A PAH analysis of example (7), repeated here, illustrates that the DPs, ‘Lara’ and “tupa’ó-pe,” are adjuncts, as indicated by the adjoined TPs in the tree below. The core arguments of the verb ‘guera’ are fulfilled by the cross-reference marker ‘che’ and a null argument.

- (7) Lára che-guera tupa’ó-pe  
 Lara B.1SG-bring church-pe  
 ‘Lara brings me to church’



Further, Hammink explains that “Neither subject nor object must be represented by an independent overt nominal in the sentence” (2010 p. 2). I find many examples in which the noun is incorporated into the verb and not found in an independent DP. Noun incorporation is one of

many factors that makes a basic word order analysis of Guaraní problematic. Hammink (2010) documents both noun and verb incorporation in Guaraní. The unmodified noun, often the patient or theme of the sentence in Guaraní, is incorporated between the pronominal argument and verb root. The incorporated noun functions like the other pronominal arguments. Because independent DPs are not in argument positions, they are not permitted to move to other phrase positions. Therefore, Hammink claims that noun incorporation derived from head movement is impossible. The examples below demonstrate both noun incorporation and non-incorporation.

Examples (5) and (6) from section 4 reveal a contrast in the position of the DP. In (5), the noun 'hova' (face) has been incorporated into the verb while in (6) the noun 'rova' (face) remains in an independent DP. This contrast illustrates the flexibility of word order and the optionality of the DP. If the sentence is grammatical without an independent DP, and it is, I can claim that independent DPs are adjuncts and the arguments are instead contained within the verb, following the PAH.

(5) Example 6b from Velazquez (1989)  
 Che ro- hova- hei  
 I A.1SG/B.2SG-face-wash  
 'I wash your face'

(6) Example 6a from Velazquez (1989)  
 Che a-johei nde-rova.  
 I A.1SG-wash you-face  
 'I wash your face'

Gynan and López Almada (2014) include an example of a student error that parallels (6) above.

(15a) ?A-johéi che rova  
 A.1SG-wash my-face  
 'I wash my face'

The following is the correct option according to Gynan and López Almada (2014).

(15b) a-jova-héi  
 A.1SG-face-wash  
 'I wash my face'

The correct option demonstrates noun incorporation. This suggests that the incorporated DP makes the sentence more grammatical than the example that contains an adjunct DP, following my conclusion above.

Interestingly, example (17), which also exemplifies noun incorporation, is not verb-final. There seems to be flexibility in the position of noun phrases both within and outside of the verb.

(16) Example from Gynan and López Almada (2014)  
 A- ñakã-karãi

A.1SG-hair-comb  
 'I comb my hair'

- (17) Example from Gynan and López Almada (2014)  
 Ña- ñembo- pyrehegua  
 A.1PL.incl- put on- shoes  
 'We put on our shoes'

The prevalence of optional independent DPs provides substantial support for a PA analysis of Guaraní, as it suggests that the arguments are instead pronominal markers and material incorporated into the verb.

### 6.3. *Is the language pro-drop?*

Thus far, I've argued that Guaraní is a pronominal argument language rather than an agreement language. Hammink considers a third alternative in which *pro* is found in argument position. Pro-type agreement is a subtype of agreement in which the agent and patient of the verb may be implicit and represented by *pro* in the syntax. Under the umbrella term of *pro-drop* is null-subject, allowing the subject specifically to be omitted. Tonhauser (2017) claims that Guaraní isn't fully a 'null subject language' as the arguments of intransitive predicates are always cross-referenced and never implicit. Hammink (2010) claims that the presence of phonologically null morphemes with fixed number-person-gender markings rather than pro-type agreement favors a pronominal argument analysis of Guaraní.

Hammink (2010) argues that *pro* does not occupy the null argument positions in the syntax, instead the features associated with the agent or patient would appear in this position. An implicit argument, represented by a null morpheme, should reference the information that would be in adjunct positions. Based on this analysis, the following examples, modified from examples found in Hammink (2010), contain a null morpheme that references the object of the sentence.

(18a) Che-sy O-∅-japo chipa  
 My-mother A3-3-make bread

(18b) Chipa o-∅-japo che-sy  
 Bread A3-3-make my-mother

(18c) O-∅-japo  
 A3-3-make  
 '[She] makes [it]'  
 \*Verified by Ernesto López  
 'My mother makes bread'

In claiming that the markers on the verb are arguments, I do not consider the alternative pro-type agreement analysis of Guaraní. Additionally, I follow Tonhauser (2017) in arguing that Guaraní is not a null-subject language. For more information on pro-type agreement, in relation to Guaraní, I recommend consulting Hammink (2010) and Tonhauser (2017).

#### *6.4. Adverbial, rather than determiner, quantification*

An important aspect of PA languages is the absence of determiner quantification but not determiner phrases in their entirety. Jelinek and Demers (1994) state, “Since DetPs are not arguments, they cannot include D-quantifiers, which function to fix the scope of the quantifier to an argument position” (p. 731). It is important to specify that the existence of some DPs is not relevant in this type of analysis. Their existence does not offer support nor rejection of the PAH. According to Kristin Denham (personal communication), determiner phrases that contain quantifiers like ‘many,’ ‘each,’ ‘some,’ and ‘few’ behave differently syntactically and semantically across languages. Without examples of the use of these specific quantifiers, the PAH cannot be rejected in relation to a particular language.

To be classified as a PA language, Guaraní should exemplify adverbial quantification rather than determiner quantification. One straightforward reason for this, according to Jelinek and Demers (1984), is that “D-quantification is obviously associated with NPs and A-quantification with VPs” (p. 725). Because pronominal arguments are contained within the verb, the verb phrase rather than adjunct noun phrases should be quantified. Acknowledging that not all languages have determiner quantification, I can question what and how quantificational features are marked in Guaraní.

Determiner quantification is expressed predicatively in Guaraní. While indefinite nouns are modified by ‘petei,’ definite nouns appear to receive no marking. ‘Petei’ doesn’t fall into the category of quantifiers noted above that become problematic for a PAH analysis. I find examples that contain quantification as part of the verb phrase, such as (19) below.

- (19) Example 31 from Hammink (2010, 13)  
 Heta xe-ryma-kuera a-reko  
 Be.many my-animals-PL 3-have  
 ‘I have many animals’ from Gregores and Suarez (1967)

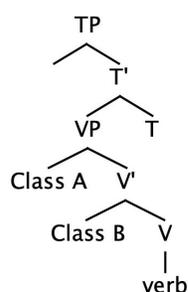
Example (19) contains the quantifier ‘many.’ Interestingly, it appears to be associated with a verb rather than the noun. There seem to be two VPs in this sentence. It could be translated instead as ‘I have animals, and there are many.’ For now, this is adequate evidence that Guaraní has adverbial quantification, allowing for a PA analysis.

### **7. Light verbs and Trees**

In this section, I propose and describe syntactic tree structures that account for a PA analysis of the syntax of Guaraní. I illustrate both transitive and intransitive verbs to demonstrate the

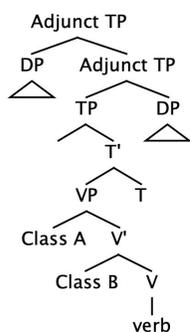
variations in argument positions within the verb, based on split-intransitivity and noun incorporation. Following adjunction traditions in syntax, I offer the basic structure in Figure 2. In this structure, there are two underlying argument positions. Instead of labeling these positions in the tree as ‘agent affix’ and ‘patient affix,’ I suggest they be labeled ‘class A’ and ‘class B.’ It would intuitively make sense to leave one argument position for agents and the other for patients; however, split-intransitivity requires further structural distinctions to be made (to be discussed in section 7.2.1).

Figure 2. Underlying Guaraní verb structure.



To provide adjunct positions for independent DPs, I expand the structure by stacking adjunct TPs on top of the clause. My analysis does not closely examine the phrase types of the arguments embedded within the verb. Therefore, they are not labeled with a phrase type in the tree structures.

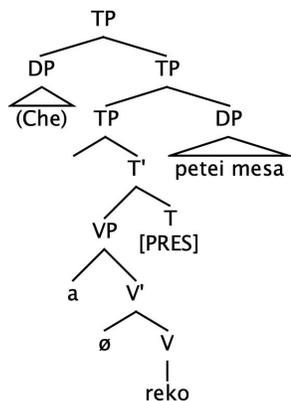
Figure 3. Underlying verb structure with adjunct TPs.



### 7.1. Transitive verbs

Transitive verbs provide few complications for this underlying tree structure. Below, I consider the structure of previous examples, repeated below, that contain transitive verbs.

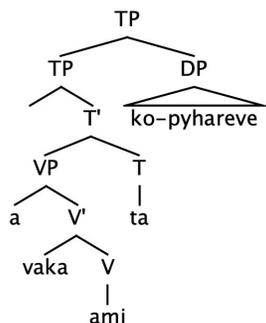
- (4) (Che) a-reko petei mesa  
 (I) A.1SG-have one table  
 'I have a table'



In (4), there is no overt argument in the class B position. Only the agent 'a' is marked on the verb, in the class A position, due to the person hierarchy. The independent pronoun and noun phrase are in adjunct positions.

In (1), repeated here, noun-incorporation allows the agent and patient arguments to be contained within the verb. The DP 'ko-pyhareve' appears in an adjunct position created by the addition of another TP.

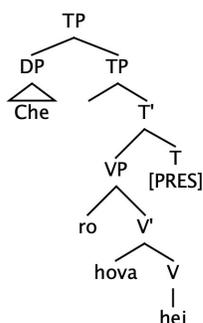
- (1) A-vaka-ami-ta ko-pyhareve  
 A.1SG-cow-milk-FUT this-morning  
 'I'll do some milking this morning'



In example (5), 'ro' captures both agent and patient information and acts as the specifier of VP.

(5) Example 6b from Velazquez (1989)

Che ro- hova- hei  
 I A.1SG/B.2SG-face-wash  
 'I wash your face'



The noun 'hova' fills the argument position between the portmanteau morpheme\* and verb. The only independent DP is 'Che' conveying agent information that is cross-referenced by 'ro.'

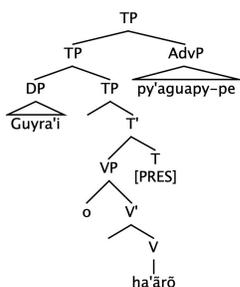
\*The portmanteau morpheme raises further questions. While it appears to be problematic, if it often occurs with noun incorporation or the remnants of a historical object marker (/i/ in 'roi-pete' meaning 'I slap you'), the empty underlying position in the syntax might be consistently filled, allowing for a PA analysis.

## 7.2. Intransitive verbs

The underlying structure proposed above should account for intransitive verbs as well. Consider the structure of example (20).

(20) Example from Ernesto López (personal correspondence)

Guyra'i o-ha'ārō py'aguapy-pe  
 Bird A.3-wait patiently-PE  
 'The bird waits patiently'



The agent marking, *o-*, is found in the class A position, and both the DP ‘guyra’i’ and the AdvP ‘pyaguapy-pe’ are adjoined, external to the clause.

### 7.2.1. *Split Intransitivity*

At this point, a discussion of split intransitivity is necessary to understanding the proposed underlying tree structure and the position of arguments in intransitive verbs. Split intransitivity refers to a difference in how the argument is marked on intransitive verbs; some arguments are marked with class A prefixes while others are marked with class B prefixes. According to Hammink (2010), “Split intransitivity considers the difference in argument marking to have a semantic basis” (p. 3). This semantic basis is manifested in the grammatical alignment of Guaraní and problematizes a word order analysis of the language. Guaraní displays Split-S alignment, sometimes referred to as active/inactive alignment or semantic alignment. According to Vajda (personal communication), “this system is called split-S because the subjects of intransitive verbs are split between more active verb types and less active verb types” (2020).

According to Mithun (1991), the parameters governing split-intransitivity include inherent lexical aspect and agentiveness. Mithun claims that inherent lexical aspect is the most important to Guaraní rather than agentiveness (1991). This is because class A pronominal prefixes are not always used with verbs that have clear semantic agents, such as ‘die,’ ‘fall,’ or ‘sleep.’ Therefore, Mithun posits that class A pronominal prefixes are found with verbs denoting events while class B pronominal prefixes denote states. Mithun (1991) and Hammink (2010) capture the distinction in intransitive verb marking by dividing intransitive verbs into two categories: unergative and unaccusative verbs. The table below provides more information for understanding the terms unergative and unaccusative.

Table 3. Unergative and unaccusative verb information.

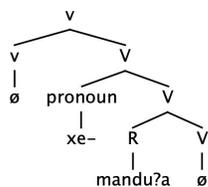
<b>Unergative verbs</b>	Denote events	Agentive “subject” is marked with class A prefixes	“Subject” is a specifier of VP
<b>Unaccusative verbs</b>	Denote states	“Subject” is a stative experiencer and marked with class B prefixes	“Subject” is a complement to the verb

In other PA languages, the argument affixes are expected to be present in the verb, since they are the arguments. The fact that Guaraní doesn’t always fill both argument positions could indicate that the PAH is not the correct explanation. However, split-intransitivity might provide justification for assuming the positions are underlying there. The transitivity and semantic basis of the verb determine which positions are filled by null arguments. Without split-intransitivity, I would be unable to apply the same underlying tree structure to both transitive and intransitive verbs. The two classes of argument markings provide the possibility of either position (A or B)

being filled based on the semantic basis of the intransitive verb. If these positions were instead labeled ‘agent affix’ and ‘patient affix,’ the ‘patient affix’ position would always be empty for intransitive verbs and not useful. While split-intransitivity at first seems counter to the PAH, I argue that it instead complements the hypothesis and provides justification for the tree structures proposed.

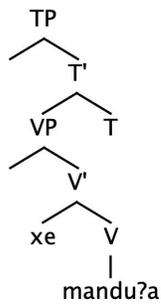
To account for split-intransitivity, Hammink (2010) incorporates light verbs into her tree structures. Light verbs are used widely in syntactic analyses across languages and are written with “little v.” They are typically verbs like ‘make,’ ‘help,’ or ‘cause’ that pair with verbs that carry more meaning. Hammink claims that the argument of an unergative verb is external to the VP and in the specifier of “little v,” and therefore, populates the light verb structure. In contrast, the argument of an unaccusative verb is internal to the VP, leaving the light verb structure empty. From a minimalist perspective, I believe it is unnecessary to apply a light verb structure to a sentence that does not make use of the added argument positions. This is exemplified in the unaccusative tree structure for (21) from Hammink (2010).

- (21) Example from Hammink (2010)  
 Xe-mandu?a  
 B.1SG-remember  
 ‘I remember’



Hammink (2010)

I include Hammink’s tree above to consider previous attempts at drawing trees and to clarify that I don’t think it is the best option, as it leaves entire structural categories unfilled. Instead of inserting a light verb structure above the VP, I draw the tree for example (21) as follows. To illustrate the structural distinction created by split-intransitivity, I place class A and class B prefixes in different argument positions. In (21), only the class B position is filled.

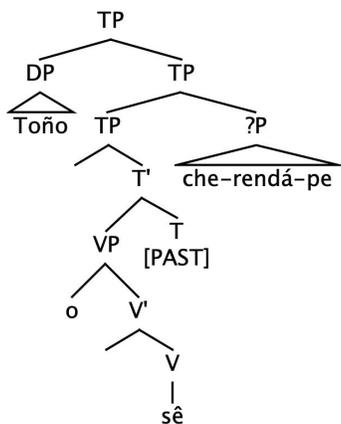


While class A particles typically denote agents, this isn't always the case. Agents are sometimes marked with class B particles in the case of unaccusative verbs. It doesn't make sense to reserve one position for strictly agents. For this reason, I've labeled the positions in the tree structure class A and class B rather than agent and patient, respectively.

The following examples demonstrate split-intransitivity and the varying position of agents in the tree structure. Example (22) contains an unergative verb while example (23) contains an unaccusative verb.

(22) Example from Ernesot López (personal correspondence)

Toño o-sê che-rendá-pe  
 Antonio A.3-left me-with-PE  
 'Antonio left with me'



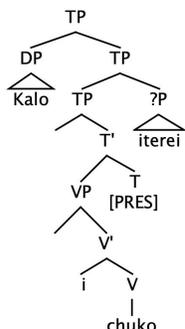
The agent of the unaccusative verb is marked on the verb with the class B prefix 'i'.

(23) Example from Ernesto López (personal communication)

Kalo i-chuko-iterei

Kalo B.3-elegant-very

'Carlos is very elegant'



## 8. Conclusion

In summary, Guaraní is a pronominal argument language in which the markers on the verb serve as arguments rather than agreement markers. Obligatory morphology on the verb and the optional presence of independent DPs provide evidence for a PA analysis. Furthermore, this analysis is motivated by the difficulty in describing a basic word order of the language. While exceptions to the PAH appear, they seem to be discourse dependent and within the scope of pragmatics rather than syntax. Many exceptions to the PAH may be due to prolonged language contact with Spanish as suggested by Hammink (2010). For instance, in the example below, I find a Spanish loanword functioning as a determiner. This determiner would complicate a PA analysis of Guaraní.

(24) Example 29 from Colijn (2007, 29)

A-ha a-je-po-reka **algun** mymba

A.1SG-go A.1SG-JE-hand-have **some** animal

'I went and caught some animal'

Further investigations could explore the structure of complementizer phrases, noun incorporation, split-intransitivity, or other specific phrase types in depth. In the future, there is much more that I hope to learn in regards to Guaraní and the complex world of syntax.

## 9. Closing thoughts

I'm very thankful to Dr. Denham, Dr. Gynan, and Lic. López Almada and all of my former linguistics professors for motivating this exploration of Guaraní syntax. They kept me inspired along the way. I appreciate all the connections I made throughout this project and the research skills that I have learned through continually reading, asking questions, making up examples, and trying to create my own grammaticality tests.

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## 11. Appendix

Table 4. Subject pronouns in Paraguayan Guaraní.

	<b>Sg</b>	<b>Pl</b>
<b>1</b>	Che	Ñande Ore
<b>2</b>	Nde	peẽ
<b>3</b>	Ha'e	Ha'ekuera

Table 5. Class A and Class B Markers.

	<b>A</b>		<b>B</b>
	areal	airéal*	chendal
1sg	a-	ai-	<b>che</b>
2sg	re-	rei-	<b>nde</b>
3sg	o-	oi-	i-
1pl.incl	ja/ña-	jai-	<b>ñande</b>
1pl.excl	ro-	roi-	<b>ore</b>
2pl	pe-	pei-	<b>pende</b>
3pl	o-	oi-	i-

\*The terms areal and chendal seem to be used more frequently by Guaraní speakers and grammar teachers to describe categories of verbs, so I have included them here. Areal prefixes that include the phoneme /i/ fall under the scope of class A but only apply to aireal verbs. The historical development of aireal prefixes as distinct from areal prefixes is not within the scope of this project.