Reduplication in Paraguayan Guarani

A descriptive account

by

Khashayar Hamidzadeh

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Abstract

This thesis presents a primarily descriptive account of the structural and meaning properties of verb and numeral reduplication in Paraguayan Guaraní, a Tupí-Guaraní language spoken by about four million people mainly in Paraguay. Based on data collected through elicitation sessions with three consultants, I demonstrate that Guaraní exhibits both patterns of total (root) and partial (disyllabic) reduplication. I will also show that this disyllabic pattern of copying is in fact due to the presence of a prosodic constraint of disyllabic ity which applies to the entire reduplication system of Guaraní. In terms of their meaning properties, Guaraní reduplicative forms are mostly associated with such iconic notions as itativity, continuity, multiplicity and distributivity. Despite the semantic regularity of Guaraní reduplicated structures from a cross-linguistic perspective, there are aspects of their form which pose challenges to templatic accounts of reduplication. A brief discussion of some of these issues concludes this work.
Acknowledgements

First and foremost, I would like to express my gratitude to my consultants, Vicente Cardoso, David Barrios and Luz Ojeda, for their pivotal role in the gestation and completion of this project. They kindly and patiently sat through long hours of elicitation and provided the data on which this thesis is based. I am also extremely grateful to Kevin Russell and Jila Ghomeshi for the invaluable advice and remedial feedback they provided me during the completion of this work. This project would have never come to fruition without their continuous support and guidance. In addition, I would like to thank Flávia Stocco and Yifan Liu for their assistance in various stages of conducting this research. I am also thankful to Student Accessibility Services at the University of Manitoba for the key role they played in providing me with the resources I needed in order to be actively involved in doing research as a graduate student. Last but not least, my special thanks goes to my family without whose ceaseless support and encouragement I would never be where I am today.
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<tr>
<td>2</td>
<td>second person</td>
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<tr>
<td>3</td>
<td>third person</td>
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<td>absolutive</td>
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<td>CAUS</td>
<td>causative</td>
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<td>conditional</td>
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<td>desiderative</td>
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<td>determiner</td>
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<tr>
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<td>perfective</td>
</tr>
<tr>
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<td>plural</td>
</tr>
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<td>plural exclusive</td>
</tr>
<tr>
<td>PL.I</td>
<td>plural inclusive</td>
</tr>
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<td>progressive</td>
</tr>
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<td>reciprocal</td>
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<td>REFL</td>
<td>reflexive</td>
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<td>relative</td>
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<td>SUBORD</td>
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<tr>
<td>TOT</td>
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Introduction

The aim of the present work is to investigate the form and meaning properties of verbal and numeral reduplication in Paraguayan Guaraní, a Tupí-Guaraní language spoken by about four million people in Paraguay and some of the neighboring areas in Brazil and Argentina.1 Although reduplication in a number of Tupí-Guaraní languages has received some attention in the literature (see Rose (2005) and references therein), I am not aware of any descriptive account of this linguistic phenomenon in Paraguayan Guaraní at the time of writing this thesis.

My work on Paraguayan Guaraní (henceforth Guaraní) started as part of a field methods course I took as a graduate student at the University of Manitoba in 2011-2012, and continued well beyond the end of the course. The course started with one consultant (Vicente Cardoso), but two more speakers (Luz Ojeda and David Barrios) joined the project later on in the year. Of the three consultants, Vicente (from Yaguarón) and David (from Caaguazú) were native speakers of Guaraní and Luz (from Asunción) was an early Guaraní-Spanish bilingual. Most of the data presented in this thesis is from my sessions with Vicente, who worked with me as my main consultant. Almost all of my elicitation sessions were run and recorded in the Experimental Linguistics Laboratory at the University of Manitoba. I elicited my data on reduplication by asking my consultants to produce the Guaraní equivalents of English sentences containing verbs from different semantic classes (Levin, 1993) or different numerals and asking them if repeating either the entire verb/numeral or part of it in the suggested Guaraní sentence would yield a well-formed and felicitous construction. In my sessions on reduplicative numerals, I also heavily

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1 Located in central South America, the Republic of Paraguay is a landlocked country which shares borders with Bolivia to the north, Brazil to the east, and Argentina to the south and west. It has an area of 406,752 square kilometers, with a population of over 6.6 million. Paraguay has a subtropical climate with temperatures ranging from an average minimum of 14°C in June to an average maximum of 34°C in January. It is divided into 17 administrative units, known as departments, plus the capital city, Asunción. Spanish and Guaraní are the official languages of the country. About 92% of the population are Roman Catholic (Love, 2012).
relied on using visual material. The consultant was presented with a number of pictures that were produced based on different logically possible interpretations of a Guaraní sentence containing a reduplicative numeral elicited in a previous session. He/she was then asked if any of the pictures matched the situation(s) described by the sentence. In addition to the elicitation strategies described above, I also prepared a short list of Guaraní verbs with various prosodic shapes and asked one of my consultants to use each of them in a Guaraní sentence. Then I checked if the verb could be reduplicated, either in the same sentence or in a different one. Several verb affixes, both stressable and non-stressable, were also tested for their reduplicability.

The field notes from most of my sessions have been posted on the Guaraní Documentation Project (GDP) database developed by Russell (2011) for internal use by the students participating in the course. In addition to field notes from elicitation sessions conducted by students, the database contains a corpus of about 15,000 words made up of texts of various genres including personal narratives, folk tales, plays, etc., as well as a working draft of a grammar of Guaraní. All the Guaraní examples in this thesis that have been taken from the GDP database are accompanied by an alphanumeric code in parentheses following their English translation (e.g., (26ekh004)). Examples that are part of the corpus texts on the database have the letter “T” as the first character of their code (e.g., (T01.001)). Those examples that come from my elicitation sessions whose field notes have not been posted on the database are accompanied by the date of the session (e.g., (Mar. 11, 2013)). All of the examples which have been taken from other sources are cited. Transcriptions of the Guaraní examples that come from my own elicitation sessions as well as the ones from the GDP follow the orthographic conventions of Guaraní (described in Chapter 2). However, there are some examples in Chapter 3 that are transcribed according to the IPA conventions in order to preserve as much phonetic detail as
possible (at least as far as broad transcription is concerned). All of the other examples are presented as they were given in the cited sources.

This thesis is organized as follows. In Chapter 1, I present a working definition of reduplication and distinguish between reduplicative structures and other types of iterative forms, such as repetition and phonological duplication. Other topics discussed in this chapter concern the structural and meaning properties of reduplication from a cross-linguistic perspective. Chapter 2 starts with a note on the genetic affiliation of Guaraní and the sociolinguistic situation inside Paraguay. Subsequent sections of the chapter provide a brief overview of the relevant aspects of Guaraní phonology, morphology and syntax. In Chapter 3, I will present and discuss the patterns of total and partial reduplication in Guaraní, with the aim of identifying some of the phonological and morphological determinants of the structure of reduplicative forms in the language. In Chapter 4, I will attempt to provide a primarily descriptive account of the semantic functions of reduplication in Guaraní and situate these meaning properties within the set of semantic categories typically expressed by reduplication cross-linguistically. The final chapter of the thesis is a short note pointing out some of the challenges that Guaraní reduplicative patterns pose for templatic accounts of reduplication.
1 Reduplication: A Cross-Linguistic Overview of Form and Function

The aim of this chapter is: (i) set the boundaries of our territory of investigation by presenting a working definition of reduplication along with a set of criteria to help us sift reduplicative phenomena from other construction types involving iteration, and (ii) provide a cross-linguistic depiction of reduplication in terms of both its formal and functional properties.

1.1 Setting the boundaries: the domain of reduplication

As a first and crucial step in the course of our investigation, it is imperative that we define the phenomenon which would constitute our focus of attention, namely reduplication, as clearly as possible, leaving aside other types of iterative forms to be dealt with elsewhere. For the purposes of this thesis, we define reduplication as a morphological process characterized by double (or multiple) realization of a word or part of a word used for inflectional or derivational purposes. In order to distinguish between reduplication and repetition, we will use the following diagnostic criteria proposed by Gil (2005, p. 33).

Criteria for Distinguishing Repetition and Reduplication

- The unit of output in repetition is greater than word, in reduplication equal to or smaller than word.
- While repetition may occur due to communicative reinforcement, the function of reduplication is never reinforcing communication. ²
- Repetitive forms may have either an iconic interpretation or no interpretation at all; the interpretation of reduplicative forms, however, is either iconic or arbitrary.

² Gil’s communicative reinforcement criterion states that repetition is often (though not always) motivated by speakers’ need to ensure successful transmission of their message in situations where factors such as excessive background noise or a lapse of attention on the part of the hearer could impede effective communication of the message.
REPLICATION IN PARAGUAYAN GUARANÍ

- Repetitive forms fall within one or more intonation groups; on the other hand, the
  intonational domain of reduplicative forms does not exceed a single intonation phrase.
- In repetition, the copies are either contiguous or disjoint, in reduplication they are
  contiguous.
- The number of copies in repetition is two or more, in reduplication usually two.

As we shall see throughout the rest of this section, these criteria provide an objective and robust
measure for differentiating between reduplication and repetition. Following Inkelas and Zoll
(2005), we will also exclude any iteration of segments motivated by purely phonological
requirements from the domain of reduplication.

Now that we have a set of defining properties to help us identify reduplicated forms, let
us look at a few examples of reduplication which clearly manifest these characteristics.

(1) Samoan (Malayo-Polynesian, Samoa)

mamate  ‘They die.’
mate     ‘He dies.’ (Moravcsik, 1978, p. 301)

In the above example from Samoan, reduplication is used inflectionally to mark number
(plurality) agreement on verbs, thus a morphological process. It passes one of Gil’s most reliable
tests for reduplication, namely the output size test, as the unit of output [ma-ma] is smaller than a
word. In addition, communication reinforcement is absent, the copies are contiguous, and the
number of copies is two. Note that in the case of this example the interpretation test cannot point
us to a specific direction, whether reduplication or repetition, since the meaning (plurality) is
iconic and iconic meanings are associated with both reduplication and repetition.3,4 In the

3 In Haiman’s (1980) terms, reduplication as a grammatical operation represents a case of the “iconicity of
motivation” where a grammatical structure mirrors the property or phenomenon it signifies. Some of the iconically
motivated categories commonly expressed by reduplication include repetition, plurality, intensivity, distributivity,

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following example from Riau Indonesian, however, we have an instance of reduplication with an arbitrary meaning.

(2) Riau Indonesian (Malayo-Polynesian, Indonesia)

Main mony-monyet Vid
play RED~monkey FAM|David

[Asking to play a game on my laptop computer which involves a monkey]

‘I want to play the monkey game, David.’ (Gil, 2005, p. 38)

The example above from Riau Indonesian is another unequivocal instance of reduplication. This is due to the fact that the iteration of the string [mony] in this utterance bears a non-iconic meaning (the concept of play) which, according to the interpretation diagnostic, is a property of reduplicative, but not repetitive, forms. Note that in this example too communicative reinforcement is absent, the copies are contiguous, and the number of copies is two. In addition, the unit of output [mony-mony] is a string smaller than a word. Finally, consider the following example from Paraguayan Guarani.

(3) Paraguayan Guarani (Tupí-Guaraní, Paraguay)

haʔe o-purahēi~rahēi.
3SG A3-sing~REDUP

‘He kept singing.’ (24ckh004)

Related to Haiman’s iconicity of motivation is the notion of the “conduit metaphor” as described by Lakoff and Johnson (2003). The conduit metaphor conceptualizes linguistic forms as containers whose content is the meaning of those words. Given this notion, we can intuitively extend the natural real-world assumption “the larger a container, the more its content” to linguistic expressions and their meanings. Using this framework, Lakoff and Johnson (2003) view iterative linguistic phenomena (including reduplication) as an example of the general iconic principle of “more-of-form-is-more-of-content”. Thus, a sentence like “He is very very very tall” expresses a greater degree of tallness than “He is very tall” does (Lakoff & Johnson, 2003, p. 127). For an account of the constraints on iconicity in language, see Dressler (1995).

In cases where no information is provided on the intonational structure of the examples in my sources, as is the case in this example from Samoan, I will avoid making reference to the output intonational domain test.

Gil’s (2005) analysis.
Even though example (3) above is associated with an iconic meaning (continuity), it still represents a clear case of reduplication as the unit of output \([\text{rahèi}-\text{rahèi}]\) is smaller than a word. Note also that communicative reinforcement cannot be identified as a motivation for the occurrence of the Guaraní iterative form in this example. Furthermore, the number of copies is two, the copies are contiguous and they fall within the same intonational phrase. All in all, these characteristics provide strong evidence in support of the reduplicative status of \([\text{o-purahèi}-\text{rahèi}]\).

A special kind of iteration which, according to Gil’s criteria, fits the characterization of reduplication is known as echo reduplication (ER), a common pan-Asian iterative pattern found in such languages as Armenian, Turkish, Kolami, Tamil, Telugu, Hindi, Persian, etc. (see Ghaniabadi, Ghomeshi, & Sadat-Tehrani, 2006; Kirchner, 2010; and references therein). A pattern of ER is normally characterized by two copies with the second copy (the reduplicant) having its onset overwritten (or replaced) by a segment specific to that reduplication pattern (Inkelas & Zoll, 2005). Semantically, echo-reduplicated patterns contribute the meaning “and similar/related things” or, as Inkelas and Zoll (2005, p. 42) put it, “X and the like”, hence, extending the denotation of the base form. Below come some examples of ER from Hindi and Persian.

4) Hindi (Indo-Aryan, India)
   a. aam ‘mango’, aam vaam ‘mangoes and the like’
   b. tras ‘grief’, tras vras ‘grief and the like’
   c. roti ‘bread’, roti voti ‘bread and the like’
   d. vakiil ‘lawyer’, vakiil šakiil ‘lawyers and such’ (Kirchner, 2010, p. 88)

5) Persian (Iranian, Iran)
   a. pir ‘old’, pir-\text{mir} ‘old and stuff’
   b. bâlâ ‘above’, bâlâ-\text{målå} ‘somewhere above’
   c. mive ‘fruit’, mive-\text{pive} ‘fruit and so forth’
   d. tarâzu ‘scale’, tarâzu-\text{marâzu} ‘scale and so on’ (Ghaniabadi et al., 2006, p. 3)
As demonstrated by the above examples, [v] is the default segment in Hindi ER forms and [m] in the ones from Persian. However, ER forms in both of these languages exhibit a characteristic referred to by Kirchner (2010) as “active identity avoidance” where full identity between the two copies is blocked via the substitution of a secondary (or non-default) segment for the default ER segment in cases where the segment to be overwritten is identical (or similar) to the default overwriting one (e.g., substitution of [p] for [m] in Persian ER forms whose bases already begin with [m]).

Based on the characterization of reduplicative forms provided above, a variety of iterative phenomena such as syntactic reduplication, phonological reduplication and baby-talk reduplication fall outside the purview of reduplication proper, and hence, do not constitute the subject matter of this thesis. However, it is worth noting here that not all authors define reduplication in the narrow sense presented above. For instance, in her paper Moravcsik (1978) defines reduplication as the inclusion of a formal (i.e., phonological or syntactic) element X in one utterance signaling a semantic representation A and a full or partial repetition(s) of X in a formal element Y in another utterance. The construction Y is a reduplication of X if (a) Y signals a semantic representation B which shares some elements of meaning with A, (b) B does not stand in a matching reduplicative relation to A, and (c) such a quantitative form-meaning distinction in an utterance pair occurs systematically in other utterance pairs within the language. This broad approach to the study of reduplicative phenomena is also adopted by Maas (2005) who defines reduplication as the analytic (or partial) iteration of grammatical constituents with a non-stylistic function at the syntactic and morphological levels. For a purely syntactic analysis of

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6 Kirchner (2010) uses active identity avoidance as a diagnostic for syntactic reduplication. However, since ER forms, at least the ones in Persian, behave like compounds (see Ghanibadi et al., 2006), I will consider them as single words which, based on Gil’s output size criterion, qualify as instances of morphological reduplication.
reduplication, see Travis (2003). Whether there is an explanatory advantage(s) in considering reduplication as a strictly morphological operation (the assumption made in this thesis) or one that is present at other levels of linguistic analysis as well is an open question which falls beyond the scope of the present study.

1.2 Other iterative phenomena

1.2.1 Phonological duplication

A type of phenomenon which involves iteration of linguistic material but does not fit the characterization of reduplication as presented in Section 1.1 is known as phonological duplication (Inkelas, 2005) or Compensatory Reduplication (CR) (Yu, 2005). CR is characterized by the repetition of a segment(s) due to purely phonological demands. It is precisely this lack of association between the iteration of phonological material and a corresponding semantic value which keeps phonologically duplicated forms outside the domain of reduplication.

Yu (2005) identifies two types of CR: syllable-well-formedness-driven CR and template-driven CR. In syllable-well-formedness-driven CR phonological material is copied to meet such phonotactic requirements as the need for an onset, avoidance of word-internal clusters, etc. Inkelas (2005) and Yu (2005) cite Hausa (Chadic, Nigeria) as a language in which this kind of phonological duplication occurs. One of the noun pluralisation strategies in Hausa involves the suffixation of a plural morpheme which bears as its medial consonant a copy of the final consonant of the stem (Inkelas, 2005). Some examples are given in Table 1.1 below.
Table 1.1 Hausa Plural Nouns

<table>
<thead>
<tr>
<th>SINGULAR</th>
<th>PLURAL</th>
<th>GLOSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Takarda</td>
<td>takardodi</td>
<td>paper</td>
</tr>
<tr>
<td>Kofa</td>
<td>kofofi</td>
<td>door</td>
</tr>
<tr>
<td>Yasa</td>
<td>yasosi</td>
<td>finger</td>
</tr>
</tbody>
</table>

Migeod (1914, p. 21)

Template-driven CR differs from syllable-well-formedness-driven CR in that in the former type the copying of phonological material occurs in order to satisfy output template constraints. For instance, Tigrinya (Semitic, Ethiopia) forms perfective stems by mapping biliteral and triliteral consonantal roots onto CVCVC and CVCCVC templates, respectively. In such contexts, the final consonant is copied to fill the final C position of the template (Rose, 1997). The following examples are illustrative.

Table 1.2 Tigrinya Perfective Stems

<table>
<thead>
<tr>
<th>ROOT</th>
<th>PERFECTIVE</th>
<th>GLOSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BILITERAL</td>
<td>Zi</td>
<td>zäläl</td>
</tr>
<tr>
<td>BILITERAL</td>
<td>Nd</td>
<td>nädäd</td>
</tr>
<tr>
<td>TRILITERAL</td>
<td>Brg</td>
<td>bärgäg</td>
</tr>
<tr>
<td>TRILITERAL</td>
<td>Dnz</td>
<td>dänzäz</td>
</tr>
</tbody>
</table>

Rose (1997, p. 127)

Note that both types of phonological duplication mentioned above can target more than a single segment (see Yu, 2005). It is also worth noting here that phonological duplication does not occur in Guaraní.

Although the above characterization of phonological duplication seems sufficiently clear, it would still be helpful, just as we saw with repetition, to have a set of diagnostics in order to distinguish morphological reduplication from its phonological counterpart. In fact, such diagnostic criteria have already been proposed by Inkelas (2005). These are presented below.
Diagnostic Criteria: Phonological vs. Morphological Duplication

- Phonological duplication serves a phonological purpose.
- Phonological duplication involves a single phonological segment.
- Phonological duplication involves, by definition, phonological identity.
- Phonological duplication is local.
- Morphological reduplication serves a morphological purpose (either by being a word-formation process itself or by enabling another word-formation process to take place).
- Morphological reduplication involves an entire morphological constituent (affix, root, stem, word), potentially truncated to a prosodic constituent (mora, syllable, foot).
- Morphological reduplication involves semantic, not necessarily phonological, identity.
- Morphological reduplication is not necessarily local.

(Inkelas, 2005, pp. 80-81)
In the next section, we will look at another type of iteration which involves repetition of syntactic constituents.

1.2.2 Repetition

Iteration of linguistic material can also involve more than a single word, rendering it a syntactic phenomenon. This iteration of syntactic constituents is referred to as syntactic reduplication (e.g., Inkelas, 2005; Karlsson, 2010; Maas, 2005). However, in order to avoid confusion with reduplication proper (which belongs to morphology) Gil (2005) suggests the term “repetition” be used for this type of word-external iterative process. As indicated in Section 1.1, if any meaning is associated with repetition it would be typically iconic (Gil, 2005, Karlsson, 2010). Some examples of repetition are provided below.

(6) Riau Indonesian

\[ \text{Tiap malam gin-dio gitu terus 'kan, ha,} \]
\[ \text{every night 3 night-DEM-DEM:DIST continue Q DEIC} \]
\[ \text{tiap malam, tiap malam, tiap malam, tiap malam ha} \]
\[ \text{every night  every night  every night  every night  DEIC} \]
[From a tale about a pilgrim and a young innocent girl; the pilgrim seduces the girl]
\‘Every night they did it, every night, every night, every night, every night.’

(Gil, 2005, p. 44)

(7) Fongbe (Niger-Congo, Benin)

\[ \text{Wá Kòkú wá útú Bàyí yi.} \]
\[ \text{arrive Koku arrive cause Bayi leave} \]
\‘Because Koku arrived, Bayi left.’ (Lefebvre & Brousseau, 2002, p. 503)

Going back to Gil’s diagnostic criteria (listed in Section 1.1), example (6) exhibits most of the characteristics of repetition and none of the conclusive properties of reduplication. Firstly, the unit of output incorporates more than a single word. Next, there is more than one intonation

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7 Travis (1999) argues against the association of reduplication, whether syntactic or non-syntactic, with iconicity. A similar view is held by Kimper (2008).
group carrying the copies. Thirdly, the contiguity of the copies is disrupted by a sequence of extra material appearing between the first occurrence of [tiap malam] and the rest of the copies. Finally, the number of copies clearly exceeds two. All of these characteristics, together with the iconic concept of iterativity evoked by the iterated forms, point unambiguously to repetition rather than reduplication. Repetition is also evident in Example (7) from Fongbe. In this example, an extra copy of the form [wá] ‘arrive’ occurs sentence initially to satisfy a purely syntactic demand motivated by the causative construction. As opposed to the previous example from Riau Indonesian, repetition in this case is not directly associated with any meaning category and, as mentioned above, is purely syntactically driven. In fact, this kind of repetition is also present in some other construction types within the language including factives, temporal adverbials and predicate clefts (Lefebvre & Brousseau, 2002). Two other characteristics of repetition which can be observed in this example are an iterative output ([wá … wá] ‘arrive … arrive’) incorporating more than a single word and the discontiguity of the two copies. Now consider the following example from English.

(8) English (Germanic)
He is very very bright. (Moravcsik, 1978, p. 301)

Although Moravcsik (1978) cites the above example as an instance of reduplication, it would be more viably analyzed, as pointed out by Gil (2005), as a case of repetition. This is supported by the fact that the unit of output “very very” is larger than a single word, denoting the

8 Gil’s (2005) analysis.
9 According to Collins (1994, as cited in Lefebvre & Brousseau, 2002, p. 504), some speakers find truncation of the initial copy to its first syllable a grammatical alternative. This is exemplified below.
Síísí/*só Kókú sisó úú u xísí ðji Báyi.
tremble Koku tremble cause fear get Bayi
‘Because Koku trembled, Bayi got frightened.’
10 Lefebvre and Brousseau (2002) refer to such iterative constructions in Fongbe as verb doubling.
iconic notion of intensivity. Other examples of this kind include phrases like “much much better”, “a long long way” and “small small creatures” (Karlsson, 2010, p. 48).

Repetition can also be syndetic, i.e., with a conjunctive element appearing between the copies.

(9) English
   a. played better and better
   b. came closer and closer (Karlsson, 2010, p. 48)

Ghomeshi, Jackendoff, Rosen, and Russell (2004) discuss a particular kind of repetitive construction in colloquial English which they refer to as “Contrastive Focus Reduplication” (CR). This construction, which has been analyzed as iteration involving syntactic operations, is associated with a “real” or “prototypical” meaning (see Ghomeshi et al., 2004; Kirchner, 2010). The following examples are cited in Ghomeshi et al. (2004, pp. 307, 314, 322).

(10) a. It’s tuna salad, not SALAD–salad.
    b. Do you LIKE-HIM–like him?
    c. There’s a guy who collects fans, these are not sports fans but FANS–fans.
    d. It might have been me, but it wasn’t ME–me.

CR constructions of the type exemplified above are characterized by an output greater than a single word and therefore would be subsumed, in Gil’s terms, under repetition rather than reduplication.

To recapitulate, the types of repetition demonstrated in this section are phenomena that occur in the syntactic component of the grammar. Unlike morphological reduplication which is

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11 According to Ghomeshi et al. (2004), CR is not exclusive to English. They cite examples similar to English CR from a number of languages including Italian, Spanish, Russian, etc.
word-internal, repetition targets and creates syntactic constituents of varying sizes that may or may not be directly associated with a semantic representation. In cases where repetition is associated with a meaning, this meaning is normally iconic.

### 1.2.3 Reduplication in child language

The last type of iteration we will briefly discuss here is child-language reduplication, i.e., production of multisyllabic forms with fully or partially identical syllables occurring as a general pattern at the early stages of young children’s phonological acquisition (e.g., [wɔwɔ] ‘water’ or [kɛkɛ] ‘take’ (Schwartz et al., 1980, p. 79)). Iterative operations of this kind have often been taken to serve as a strategy employed by young children to help them develop the ability to produce complex polysyllabic words (see Fee & Ingram, 1982; Ferguson, 1983; Schwartz et al., 1980).

Ferguson (1983, p. 241) mentions four functions for reduplication in child language: “play/practice, segmentation, polysyllabicity and syllable-final consonant production”. The first function refers to the pleasurable nature of using reduplicated forms in both the babbling and more advanced phases of phonological development where children make use of reduplication as a means of language play which in turn aids them in mastering the production of complex phonological structures. Through its segmentation function, reduplication helps children develop the ability to identify and produce distinctive phonological units (i.e., different segments and syllabic structures). The ability to remember and articulate polysyllabic words arises (partly) from polysyllabicity, and the use of coda consonants is facilitated by the last function of reduplication mentioned above (i.e., syllable-final consonant production). It should be obvious at this point that repetitive forms of this sort, despite bearing the label reduplication, are by no
means subsumable under the category of reduplication proper as their use is not motivated by inflectional or derivational requirements of the grammar.

Even though the types of iteration outlined in Sections 1.1 and 1.2 do not constitute the entire range of iterative phenomena found in human language, it is hoped that they help the reader appreciate where the theoretical approach adopted in this study draws the line between reduplication as a morphological process and other forms of iteration which fall beyond our definitional boundaries of reduplication.

1.3 The geometry of reduplicative forms: total vs. partial reduplication

A formal distinction is often made in the literature between two types of reduplication: full/total vs. partial. The basis for such a distinction lies in whether it is the entire word/stem/root which is iterated or only part of it. Some examples of each of these two types of reduplication are given below.

(11) Full word reduplication:
   Chukchi (Chukotko-Kamchatkan, Russian Federation)
   wət ‘leaf’, wətwət ‘leaf (ABS SG)’ (Hurch, 2005 ff.)

(12) Full word reduplication:
   Tausug (Austronesian, Philippines)
   mag-bichara ‘speak’, mag-bichara-bichara ‘spread rumors, gossip’
   (Rubino, 2005, p.11)

(13) Partial (CV) reduplication:
   Fijian (Malayo-Polynesian, Fiji)
   Balavu ‘ long’ vs. babalavu ‘long (pl)’ (Hurch, 2005 ff.)

   Even though reduplication generally involves two copies of the base, it is possible to find cases in which the number of copies exceeds two. Reduplicative forms of this kind are
sometimes referred to as “multiple reduplication” (Gil, 2005, Moravcsik, 1978). Two examples of multiple reduplication are provided below.12

(14) Tigré Multiple Reduplication (Semitic, Eritrea)
dəgm-a: ‘tell, relate’,
dəgaːgəm-a: ‘tell stories occasionally’,
dəgaːgaːgəm-a: ‘tell stories very occasionally’,
dəgaːgaːgaːgəm-a: ‘tell stories infrequently’

(Rose, 2003, as cited in Rubino, 2005, p. 15)

(15) Riau Indonesian Multiple Reduplication
Udah si-si-siap?
PFCT RED~ready
[Getting ready to go out, speaker hurries friend]
‘Is everything ready?’

(Gil, 2005, p. 58)

Note that in both of the above examples the unit of output is smaller than a word and this licenses their analysis as reduplication albeit they have iconic interpretations (attenuation and universal quantification respectively).

As Rubino (2005) points out, reduplicated forms may also be characterized as simple, complex or automatic. The distinction between simple and complex reduplication is a phonological one. In simple reduplication, the reduplicant is an identical copy of the base, whereas complex reduplication involves some degree of phonological mismatch between the two copies (e.g., substitution or addition of segments or reversal of their order). For instance, Mangarayi (Australian) employs a pluralizing reduplication operation in which the reduplicant is made up of the onset of the second syllable of the base plus the rime of its first syllable. Reduplicated forms thus created are sometimes followed by the affix -ji or -ji. This is exemplified by the forms in Table 1.3 below.

12 The example from Tigré represents a case of internal reduplication in which the reduplicant is a copy of an internal syllable of the word being partially reduplicated.
Table 1.3 Complex reduplication in Mangarayi

<table>
<thead>
<tr>
<th>SIMPLE FORM</th>
<th>REDUP. FORM</th>
<th>SIMPLE TRANS.</th>
<th>REDUP. TRANS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gurjag</td>
<td>gurjurjagi</td>
<td>lily</td>
<td>having lots of lilies</td>
</tr>
<tr>
<td>ganji</td>
<td>ganjanijji</td>
<td>child of maternal grandmother’s brother</td>
<td>children of maternal grandmother’s brother</td>
</tr>
<tr>
<td>jimgan</td>
<td>jimgimgan</td>
<td>knowledgeable person</td>
<td>knowledgeable people</td>
</tr>
<tr>
<td>bangal</td>
<td>bangangalji</td>
<td>egg</td>
<td>having lots of eggs</td>
</tr>
</tbody>
</table>

[Merlan 1982, as cited in Rubino, 2005, pp. 15-16]

Echo constructions represent another case of complex reduplication. Some examples from Tamil (Dravidian, India) are given in Table 1.4 below.

Table 1.4 Tamil Echo constructions

<table>
<thead>
<tr>
<th>SIMPLE FORM</th>
<th>REDUP. FORM</th>
<th>SIMPLE TRANS.</th>
<th>REDUP. TRANS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>puli</td>
<td>puli kili</td>
<td>tiger</td>
<td>tigers and other beasts</td>
</tr>
<tr>
<td>maram</td>
<td>maram kiram</td>
<td>tree</td>
<td>trees and other growing things</td>
</tr>
<tr>
<td>kaappi</td>
<td>kaappi kiippi</td>
<td>coffee</td>
<td>coffee and other beverages</td>
</tr>
</tbody>
</table>

[Schiffman 1999, as cited in Rubino, 2005, pp. 16-17]

Automatic reduplication refers to a reduplicative operation whose occurrence is necessary in order for another morphological process (e.g., affixation) to take place. As Rubino (2005) notes, automatic reduplication and the other morphological operation which triggers its occurrence are considered to constitute a single morpheme. Rubino (2005, p. 18) cites the Ilocano aginCV- prefixation used to express pretense as an example of automatic reduplication (e.g., singpet ‘behave’ vs. aginsi-singpet ‘to pretend to behave’).

Reduplicative forms with discontiguous copies also occur (although, as Gil (2005) points out, such cases are relatively rare). For example, Mitigative reduplicated forms in Dholuo (Nilo-
Saharan, Kenya) are characterized by two non-adjacent copies separated by the prefix *a-* attached to the base as shown below.

**Table 1.5 Mitigative reduplication in Dholuo**

<table>
<thead>
<tr>
<th>SIMPLE FORM</th>
<th>REDUP. FORM</th>
<th>SIMPLE TRANS.</th>
<th>REDUP. TRANS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>teso</td>
<td>teso atéda</td>
<td>cook</td>
<td>just cooking</td>
</tr>
<tr>
<td>nyóro</td>
<td>nyóro anyórâ</td>
<td>yesterday</td>
<td>only yesterday</td>
</tr>
<tr>
<td>kúóyô</td>
<td>kúóyô akúóyâ</td>
<td>sand</td>
<td>mere sand</td>
</tr>
</tbody>
</table>

(Omondi, 1982, as cited in Rubino, 2005, p. 17)

**1.4 A brief survey of the semantic functions of reduplication**

In this section, we will briefly look at some of the cross-linguistically recurring semantic categories expressed by reduplication: augmentation (increased size/quantity), intensity (increase in degree), diminution (decrease in size/quantity) and attenuation (decrease of degree) (Kajitani, 2005; Moravcsik, 1978).

A distinction can be made between two types of augmentation: participant augmentation and event augmentation (see Moravcsik, 1978, p. 317). Participant augmentation, when expressed by reduplicative forms, is generally realized as nominal or verbal reduplication while event augmentation is indicated by reduplicative verbs. As pointed out by Moravcsik (1978), augmentative reduplication denotes plurality of participants or events which may or may not be understood as being spatially or temporally distributed. Reduplicative nouns associated with participant augmentation can have a range of interpretations including simple plurality ‘Xs’, collectivity ‘all X’ and distributivity ‘each X’. This is illustrated by the following examples.
### Table 1.6 Participant augmentative reduplication

<table>
<thead>
<tr>
<th>LANGUAGE</th>
<th>FUNCTION</th>
<th>SIMPLE FORM</th>
<th>REDUP FORM</th>
<th>SIMPLE TRANS.</th>
<th>REDUP. TRANS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samoan</td>
<td>simple plurality</td>
<td>tuafafine</td>
<td>tuafafine</td>
<td>brother’s sister</td>
<td>brother’s sisters</td>
</tr>
<tr>
<td>Papago</td>
<td>simple plurality</td>
<td>bana</td>
<td>baabana</td>
<td>coyote</td>
<td>coyotes</td>
</tr>
<tr>
<td>Yoruba</td>
<td>distributivity</td>
<td>òsè</td>
<td>òsòòsè</td>
<td>week</td>
<td>every week</td>
</tr>
<tr>
<td>Pacoh</td>
<td>collectivity</td>
<td>bar</td>
<td>babar</td>
<td>two</td>
<td>all two</td>
</tr>
</tbody>
</table>

[Note. All examples in the above table are taken from Moravcsik, 1978.]

On the other hand, event augmentation expressed by verb reduplication is commonly associated with such meanings as repetition, continuity and habituality. It is worth noting here that repeated events can be understood as being performed by either the same or different participant(s) and the events themselves may or may not occur within the same spatial or temporal boundaries. Some examples are given below.

### Table 1.7 Event augmentative reduplication

<table>
<thead>
<tr>
<th>LANGUAGE</th>
<th>FUNCTION</th>
<th>SIMPLE FORM</th>
<th>REDUP FORM</th>
<th>SIMPLE TRANS.</th>
<th>REDUP. TRANS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sundanese</td>
<td>repetition (event involving same participant)</td>
<td>guyon</td>
<td>guguyon</td>
<td>to jest</td>
<td>to jest repeatedly</td>
</tr>
<tr>
<td>Twi</td>
<td>repetition (event involving same participant)</td>
<td>tèem</td>
<td>tèetèem</td>
<td>to cry out (once)</td>
<td>to cry out (repeatedly)</td>
</tr>
<tr>
<td>Samoan</td>
<td>repetition (event involving different participants)</td>
<td>mate</td>
<td>mamate</td>
<td>he dies</td>
<td>they die</td>
</tr>
<tr>
<td>Tzeltal</td>
<td>continuity</td>
<td>-suh</td>
<td>-suhsuh</td>
<td>urge it done</td>
<td>continue to urge that it be done</td>
</tr>
<tr>
<td>Aztec</td>
<td>habituality</td>
<td>zanilia</td>
<td>zazazanilia</td>
<td>to narrate</td>
<td>to have the habit of narrating</td>
</tr>
</tbody>
</table>

[Note. All examples in the above table are taken from Moravcsik, 1978.]
Another cross-linguistically recurrent function of reduplication is intensification which is normally expressed by reduplicative verbs and adjectives. With verbs, intensive reduplication denotes an increased amount of energy exerted in performing an action or a greater than normal size of effect caused by an action or event. Reduplicative adjectives, however, generally express ‘more of’ a property (Lakoff & Johnson, 2003; Moravcsik, 1978). The following examples are illustrative.

**Table 1.8 Intensive reduplication**

<table>
<thead>
<tr>
<th>LANGUAGE</th>
<th>SIMPLE FORM</th>
<th>REDUP FORM</th>
<th>SIMPLE TRANS.</th>
<th>REDUP. TRANS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agta</td>
<td>dána</td>
<td>dádána</td>
<td>old</td>
<td>very old</td>
</tr>
<tr>
<td>Agta</td>
<td>magbílag</td>
<td>magbíbilag</td>
<td>run</td>
<td>run hard and far</td>
</tr>
<tr>
<td>Tagalog</td>
<td>mabasag</td>
<td>magkabasagbasag</td>
<td>get broken</td>
<td>get thoroughly broken</td>
</tr>
<tr>
<td>Ewe</td>
<td>gblé</td>
<td>gégbilé</td>
<td>be spoiled</td>
<td>be very much spoiled</td>
</tr>
<tr>
<td>Dyirbal</td>
<td>balgan</td>
<td>balgabalgan</td>
<td>hit</td>
<td>hit too much</td>
</tr>
</tbody>
</table>

[Note. All examples in the above table are taken from Moravcsik (1978).]

Intriguingly, reduplication is also used to express the meaning categories of diminution and attenuation. Diminution is often expressed by nominal reduplication and attenuation by reduplicated verbs and adjectives as exemplified below.

**Table 1.9 Diminutive and attenuative reduplication**

<table>
<thead>
<tr>
<th>LANGUAGE</th>
<th>FUNCTION</th>
<th>SIMPLE FORM</th>
<th>REDUP FORM</th>
<th>SIMPLE TRANS.</th>
<th>REDUP. TRANS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agta</td>
<td>diminution</td>
<td>wer</td>
<td>walawer</td>
<td>creek</td>
<td>small creek</td>
</tr>
<tr>
<td>Thompson</td>
<td>diminution</td>
<td>sqaˈxa’</td>
<td>sqaˈqx’a’</td>
<td>dog/horse</td>
<td>little dog/horse</td>
</tr>
<tr>
<td>Quileute</td>
<td>attenuation</td>
<td>kwáti</td>
<td>kwaya’.ti</td>
<td>he tried</td>
<td>he tried a little</td>
</tr>
<tr>
<td>Tagalog</td>
<td>attenuation</td>
<td>mahiya</td>
<td>mahiyahiya</td>
<td>ashamed</td>
<td>be a little ashamed</td>
</tr>
</tbody>
</table>

[Note. All examples in the above table are taken from Moravcsik (1978).]
Based on a cross-linguistic comparison of the frequency of semantic categories expressed by reduplication, Kajitani (2005) provides a ranking of the four semantic functions of reduplicative forms presented in this section. According to Kajitani’s hierarchy, reduplication is used more commonly across languages to express augmentation and intensity than it is used to signal diminution and attenuation. This hierarchy further suggests that while there is a preference for augmentation over intensity, attenuation is preferred over diminution (see Kajitani, 2005, p. 102 for a schematic representation of the hierarchy). For further detail on the semantics of reduplication, see Kouwenberg and LaCharité (2001, 2005), Naylor (1986) and Regier (1994).

1.5 Summary

In this chapter, I provided an overview of the phenomenon of reduplication and its formal and functional characteristics from a cross-linguistic perspective. The first part of the chapter was concerned with presenting a working definition of reduplication as a morphological operation as well as a set of diagnostic criteria for distinguishing reduplication proper from other iterative linguistic phenomena such as compensatory reduplication, syntactic reduplication and baby-talk reduplication. In the second part of the chapter, I briefly discussed some of the formal and functional characteristics of reduplicative forms. With respect to form, two types of reduplication (i.e., full vs. partial) were distinguished on the basis of the size of the reduplicant. It was also shown that reduplicative forms may involve more than two copies and that the copies of a reduplicated form can be non-adjacent. Finally, some of the cross-linguistically recurring meanings expressed by reduplication were presented. Based on a hierarchy of the semantic

13 Kajitani’s sample included 16 genetically and geographically unrelated languages.
14 The definition of reduplication on which Kajitani (2005) based her study was the one given by Moravcsik (1992) (reiterated in Moravcsik, 2003, p. 453): a pattern where “the double or multiple occurrence of a sound string, syllable, morpheme, or word within a larger syntagmatic unit is in systematic contrast with its single occurrence, with the iterated elements filling functionally non-distinct positions”.

properties of reduplication proposed by Kajitani (2005), it was specifically suggested that of the meanings discussed augmentation is the most and diminution the least commonly occurring.
2 An Overview of the Grammar of Paraguayan Guarani

In the present chapter, we will briefly look at some of the aspects of the grammar of Paraguayan Guarani which are more or less relevant to our discussion of reduplication in the subsequent chapters. In Section 2.1 below, I will present a few points about the genetic affiliation of Guarani and the sociolinguistic situation of Paraguay. Sections 2.2-2.4 outline some of the phonological, morphological and syntactic characteristics of the language. Section 2.5 summarizes and concludes the chapter.

2.1 Some genealogical and sociolinguistic remarks

2.1.1 Genetic affiliation

Paraguayan Guarani, also known as Avañe’ẽ, belongs to the Guarani macrolanguage, one of the numerous languages of the Tupi-Guarani linguistic family. The Tupi-Guarani language family is classified into eight subgroups and is itself one of the seven language families subsumed under the Tupi stock, a major language group in South America. Tupian languages cover large parts of Brazil, extending from the northern region of the country to its southern states, as well as some of the countries on the northern and western Brazilian borders, including French Guiana, Peru, Bolivia, Paraguay and Argentina (Gregores & Suarez, 1967; Jensen, 1998; Lewis, 2009; Rodrigues, 1999).

The Tupi-Guarani language group has received a relatively high degree of attention from linguists and is referred to by Jensen (1999, p. 125) as “perhaps the best-known genetic grouping in Amazonia.” According to Rodrigues (1986), the name Tupi-Guarani has derived from

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15 See Table 5.1 in Jensen (1999, pp. 130-132) for a survey of the different subgroups within the Tupi-Guarani language family.
Tupinambá,\textsuperscript{16} or Old Tupí, and Guarani\textsuperscript{17}, two dominant language groups in colonial South America. In fact, Tupinambá and Guarani have been classified as two varieties, or dialects, of a Tupí-Guaraní proto-language as there exist considerable systematic phonological, lexical and grammatical correspondences between the two (Gregores & Suarez, 1967; Rodrigues, 1986).

Rodrigues (p.c.) suggests that the Tupí-Guaraní branch of the Tupian stock might have appeared first in the state of Rondônia (northwestern Brazil) and then spread out to other areas through four major migration waves:

- a wave of migration to the south where the Guaranian languages developed, a wave to the east into Bolivia where Sirionó and Gurayú developed, a wave east to the Atlantic Coast where Tupínambá developed, and a wave (or several waves) to the north and east into the greater Amazon region. (as cited in Jensen, 1999, p. 129)

Attempts at documenting Old Guaraní and Tupinambá, referred to by Rodrigues (1986, p. 34) as the “classical languages of South America”, first began in the 16\textsuperscript{th} and 17\textsuperscript{th} centuries during the colonization of the continent by the Europeans. The first written words of Tupinambá can be traced back to early 16\textsuperscript{th} century; however, it was several decades before the first texts in this language were eventually published in 1575. These were translations of some Christian prayers rendered into Tupinambá from Portuguese by the first Jesuit missionaries in colonial Brazil. The first grammar of Tupinambá was published in 1595 through the efforts of Padre José de Anchieta, who was also responsible for the creation of a plethora of literary works in this language (Rodrigues, 1986). According to Anchieta (1595, as cited in Jensen, 1999, p. 125)

\textsuperscript{16} The Tupinambá tribes inhabited an area that stretched from present-day Rio de Janeiro up to the north and were the main indigenous group to encounter the Portuguese colonists (Jensen, 1999).

\textsuperscript{17} The Guaraní people lived to the south of the area which is now known as São Paulo and were the primary group to establish contact with the colonizing Spaniards. The language spoken by this group in that period is now referred to as Old Guarani (Jensen, 1999).
Tupinambá was the most widely spoken language on the coast of Brazil and, as suggested by Jensen (1999), has influenced Brazilian Portuguese to a great extent. As opposed to Old Tupí, which was mainly spoken within the territories controlled by the Portuguese, Old Guaraní was used in the regions dominated by Spanish colonists. The first grammars of Old Guaraní were published between 1625 and 1640 by two missionaries: Alonso de Aragona and Antonio Ruiz de Montoya. Besides his grammar, published between 1639 and 1640, Montoya also produced two dictionaries, one Spanish-Guaraní and the other Guaraní-Spanish entitled Tesoro de la Lengua Guaraní (Treasure of the Guaraní Language). This latter dictionary is especially noteworthy as a rich and valuable work in the area of language documentation in South America (Rodrigues, 1986).

2.1.2 The sociolinguistic situation of Paraguay

The majority of speakers of Paraguayan Guaraní live in Paraguay,\(^\text{18}\) where it has been an official language since 1992 alongside Spanish, but it is also spoken in the bordering Brazilian states of Mato Grosso and Paraná as well as in northeastern Argentina (Gregores & Suarez, 1967; Lewis, 2009). There are approximately four million speakers of Guaraní in Paraguay, who are mostly mestizos (Jensen, 1999).\(^\text{19}\)

The sociolinguistic landscape of Paraguay has generally been depicted as a stable bilingual society where the majority of people can speak both Spanish and Guaraní (e.g., Patrinos, Velez, & Psacharopoulos, 1994; Roett & Sacks, 1991; Romaine, 1995; Rubin, 1968; Trudgill, 1983; Wardhaugh, 1992). In this regard, Paraguay is often considered a unique

\(^{18}\) Paraguay is a landlocked country in central South America with a population of over 6.6 million.

\(^{19}\) The term mestizo is used in Latin America to refer to a person of mixed European (especially Spaniard) and native American ancestry.
case among South American countries, which show a general trend of transitioning from bilingualism towards Spanish monolingualism. What makes Paraguay an even more intriguing case is the fact that it represents a country with a non-indigenous population\(^{20}\) that has adopted an indigenous language, raising it to a symbol of national identity. This image of Paraguay as an exemplary case of a bilingual society, however, is not quite uncontroversial. For example, Fasoli-Wormann (2002) maintains that Paraguay as a bilingual society is simply a “myth”, suggesting that the majority of Paraguayans are monolingual in either Guaraní or Spanish, perhaps with limited knowledge of the other language (as cited in Tonhauser, 2006, p. 122). Likewise, Gomez Rendón (2008, p. 208) describes the bilingualism in Paraguay as “neither stable nor societal, but changing and diglossic”.\(^ {21}\) Thus, according to this latter view, one could consider Paraguay a bilingual country, but not a country with a bilingual population.\(^ {22}\)

Despite this controversy over the nature of bilingualism in Paraguay, there seems to be one issue over which scholars’ views converge, namely, the socio-economic disparity between Spanish-speakers and speakers of Guaraní, ensuing, at least partly, from Paraguayans’ differential attitude towards these two languages. Noting this difference in attitude towards Spanish and Guaraní in Paraguay, Gregores and Suarez (1967) and Rubin (1968), for instance, suggest that in the eyes of Paraguayans, Guaraní is in a way inferior to Spanish in the sense that

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\(^{20}\) According to Patrinos, Velez and Psacharopoulos (1994), the number of indigenous people in Paraguay accounts for only 2.5% of the country’s entire population.

\(^{21}\) Here, the term diglossia is to be understood in terms of Fishman’s extension. In Fishman’s terms, diglossia refers to a situation where two different languages co-exist in a society, with either language serving a distinct function(s). In this complementary relationship, one language, referred to as the H(igh) language, is associated with formal contexts (e.g., literature, education, religion, the media, etc.), whereas the other, the L(ow) language, serves a colloquial function, used in contexts such as casual conversations, folk tales, shopping, etc. In fact, Fishman uses this sense of the term diglossia to describe the linguistic situation in Paraguay, with Spanish serving as the H and Guaraní the L language (see Fishman, 1971, pp. 73-90). See also Spolsky (1998) on the role of “domains” in a bilingual’s choice of language.

\(^{22}\) As Tonhauser (2006) puts it, it would then be more accurate to describe Paraguay as a multilingual country for, besides Paraguayan Guaraní, there are approximately 17 other indigenous languages in this country spoken by about 50,000 people.
it has less “prestige” associated with it than Spanish does. Trudgill (1983) states that the choice between Spanish and Guaraní depends on such factors as geographical location (Spanish is used in the city, Guaraní in the countryside), type of context (formal contexts trigger the use of Spanish), and the topic of conversation (Guaraní is used to talk about trivial matters, while serious affairs are discussed in the language that both the speaker and hearer feel most comfortable with) (see also Rubin, 1968; Wardaugh, 1992). Tonhauser (2006) also identifies a similar situation. She writes:

Roughly speaking, the larger a city is and the closer it is to Asunción, the more Spanish dominates. This results in an association of Guaraní speakers with "uneducated farmers" and Spanish speakers with "educated employees". Many parents in urban areas choose not to speak Guaraní to their children, hoping thereby to give them an advantage in Spanish. (p. 124)

Similarly, Gynan (2005) suggests that, based on the analysis of census data collected in recent years, while there is a high rate of Guaraní-Spanish bilingualism in urban and border areas, monolingualism in Guaraní is a characteristic of rural regions. It should also be noted that in Paraguay men tend to use Guaraní more often than women do, especially when both participants in a given conversation are male (Gynan, 2005; Trudgill, 1983; Wardhaugh, 1992).

Even though Guaraní has been a required subject in Paraguayan schools since the mid 1990s, it is still overshadowed by Spanish in the country’s educational system, as well as in business, politics and the media (Patrinos et al., 1994; Tonhauser, 2006). According to Patrinos et al. (1994) although Spanish-speakers make up only 36% of the total population of Paraguay,

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23 Rubin (1968, p. 62) defines prestige as “the measure of the value of a language in social advance.”
they represent 60% of those with higher education. On the other hand, Guarani monolinguals, who constitute 8% of the population, are not represented at all among those with higher education, but they make up 23% of the individuals who have no primary schooling. Patrinos et al. (1994) also report a substantial disadvantage experienced by Guarani monolinguals with respect to earnings, a phenomenon which can partly be attributed to the inequality between this language group and the Spanish-speaking population in terms of access to academic opportunities.

However, in recent years, following the implementation of a new language policy which aims at promoting bilingual education in Paraguayan schools, a rather dramatic shift in people’s attitude towards a more positive view of Guarani has begun. For example, a comparison of the results of two surveys conducted by Gynan in 1995 and 2001 shows that while in 1995 the vast majority of Spanish-speaking couples raised their children exclusively in Spanish, the situation was quite different in 2001, with 80% of Spanish-speaking households fostering a bilingual environment at home (see Gynan, 2005).

2.1.3 Pure vs. mixed Guarani

A distinction has been made in the literature between two varieties of Paraguayan Guarani: Guaraniete (pure Guarani) and Jopará (mixed Guarani).

Guaraniete, or standard academic Guarani, is characterized by the systematic eradication of hispanicisms from Guarani, thereby purging it of any visible traces of Spanish. This variety of Guarani features a great number of neologisms and is taught and promoted in Paraguayan schools. Apart from a small élite, standard Guarani has not been able to establish

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24 Krivoshein de Canese and Corvalan (1992) refer to this variety of Guarani as Guarani Paraguayo Estandar (as cited in Tonhauser, 2006, p. 124)
itself among Paraguayans as the colloquial variety of speech and has often been described as a failed attempt to counter the influence of Spanish (Gomez Rendón, 2008; Tonhauser, 2006). However, the term Guaraniete is also sometimes used to refer to the variety of Guaraní spoken in rural areas.25 Although it is not as “pure” as standard Guaraní, this variety still uses a considerably smaller number of Hispanicisms than Jopará. Jopará, on the other hand, is the variety of Paraguayan Guaraní formed by mixing Guaraní and Spanish together (Gomez Rendón, 2008; Tonhauser, 2006). According to Gomez Rendón (2008), the use of Jopará in Paraguay can be traced back to the 17th century. Today, it is typically used as the colloquial style of speech in urban areas where most people can speak both Spanish and Guaraní (with varying degrees of proficiency). Nevertheless, as Gomez Rendón (2008) puts it, even though this code-mixing form of communication is commonly associated with urban areas, it is perfectly possible to hear someone from the countryside speak Jopará.

Gomez Rendón (2008) identifies two varieties of Jopará: Guarañol26 and Castení.27 Guarañol refers to the variety of Jopará whose matrix language is Guaraní, whereas Castení is used for the variety in which the matrix language is Spanish. In terms of their lexicons, these varieties of Jopará differ from each other in that while the majority of the lexical items of Guarañol are Spanish, Castení mostly uses Guaraní words. Morphosyntactically, Jopará Guaraní is similar to traditional Guaraní. However, they show different degrees of polysynthesis, with Jopará Guaraní being less polysynthetic than traditional Guaraní and thus closer to Spanish in this respect. There are also noticeable phonological differences between Guarañol and traditional

25 This variety of Guaraní is also referred to as Guaraní Paraguayo Colloquial (Krivoshein de Canese & Corvalan, 1992, as cited in Tonhauser, 2006, p. 124).
26 The term Guarañol is a blend of Guaraní and Español coined by Melià (1988) (as cited in Gomez Rendón, 2008, p. 209). It is also referred to by Gomez Rendón as Jopará Guaraní (JG).
27 Castení is a blend of Castellano and Guaraní (Gomez Rendón, 2008, p. 209). It is also referred to as Jopará Spanish (JSp). As Gomez Rendón (2008) puts it, since JSp uses Spanish as its matrix language, it would be more properly classified as a variety of Spanish.
Guarani at both segmental and suprasegmental levels (see Gomez Rendón, 2008, pp. 215-224 for further detail).

2.2 Phonology

The articulatory system of Paraguayan Guarani is characterized by an egressive pulmonic airstream mechanism, with the phonation modes being voiceless and voiced. While vocalic sounds are all normally voiced, both voiceless and voiced consonants occur in the language. The surface consonant and vowel inventories of Guarani are given in Tables 2.1 and 2.2 respectively. Note that voiced stops in Guarani realize as nasal when they occur in a nasal harmony domain (discussed briefly later in this section); otherwise, they occur as pre-nasalized stops.

Table 2.1 Guarani Consonant Inventory

<table>
<thead>
<tr>
<th></th>
<th>Bilabial</th>
<th>Labiodental</th>
<th>Alveolar</th>
<th>Palatal</th>
<th>Velar</th>
<th>Labiovelar</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plosive</td>
<td>P</td>
<td>T</td>
<td></td>
<td></td>
<td>k</td>
<td>k^w</td>
<td>?</td>
</tr>
<tr>
<td>Pre-nasalized stop</td>
<td>mb</td>
<td>nd</td>
<td></td>
<td>dʒ</td>
<td>ng</td>
<td>ng^w</td>
<td></td>
</tr>
<tr>
<td>Nasal</td>
<td>m</td>
<td>n</td>
<td>p</td>
<td>n</td>
<td>η</td>
<td>η^w</td>
<td></td>
</tr>
<tr>
<td>Tap</td>
<td>v</td>
<td>S</td>
<td>j̞</td>
<td>ŋ</td>
<td>y</td>
<td>y^w</td>
<td>h</td>
</tr>
<tr>
<td>Fricative</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lateral approximant</td>
<td></td>
<td>l</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Non-native Consonants

<table>
<thead>
<tr>
<th></th>
<th>Alveolar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop</td>
<td>d</td>
</tr>
<tr>
<td>Trill</td>
<td>r</td>
</tr>
</tbody>
</table>

Table 2.2 Guarani Vowel Inventory

<table>
<thead>
<tr>
<th></th>
<th>Front</th>
<th>Central</th>
<th>Back</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>i</td>
<td>i̯</td>
<td>u</td>
</tr>
<tr>
<td>Mid</td>
<td>e</td>
<td>e̯</td>
<td>o̯</td>
</tr>
<tr>
<td>Low</td>
<td>a</td>
<td>a̯</td>
<td></td>
</tr>
</tbody>
</table>
In the above consonant inventory, the glottal fricative /h/ sometimes realizes as [χ] or [x]. Also, it is common for the labiodental fricative /v/ to lenite to [ʋ], or even be deleted. The deletion of [v] mostly (though not exclusively) happens when it occurs in an unstressed syllable preceded by a stress-bearing syllable. (Examples in this section are presented using the IPA conventions.)

(1) a. túva ‘father’ → túa
   b. tuviʃá ‘big’ → tuifiá
   c. péva ‘that one’ → péa
   d. ðeṽi ‘again’ → ðei

Similarly, the voiced labiovelar fricative /ɣʷ/ typically realizes as the approximant [w], with almost no perceptible frication. Note also that the palatal affricate /ʤ/ sometimes occurs as [ʒ] or even [j]. This obstruent also exhibits a similar behavior to the pre-nasalized stops with respect to nasal harmony in that it appears as a full nasal in a “nasal span” (Gregores and Suarez’s (1967) term for a nasal harmony domain). However, unlike the pre-nasalized stops, which trigger regressive nasal harmony, it never triggers a nasal spread, in this respect behaving similarly to voiceless stops.

(2) a. /ðe-hendu/ [NMLZ-hear] → ňe-hendu
   b. /ðe-ʤapo/ [NMLZ-do] → ðe-ʤapo

The surface structure of Guaraní syllables is characterized by a (C)V pattern, with the possibility of an optional high vowel acting as a glide either preceding or following the nucleus (e.g., [piaʔé] ‘fast’, [purahéi] ‘sing’). Onsets are optional, and codas and consonant clusters impermissible (although this does not apply to Spanish loanwords). Stress is often word-final, but non-final stress also occurs. In cases where a base is followed by any of a number of

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28 Note that the use of the symbol /ʤ/ here is only for convenience. I am not sure at this point where this phoneme’s precise place of articulation is within the post-alveolar to palatal region.
stressable suffixes including, but not limited to, -pa [totalitive], -uka [causative], -se
[desiderative] and –mĩ [diminutive], stress shifts from the final syllable of the root to the stress-attracting suffix (e.g., [fe-rũ] [B1SG-father] ‘my father’ vs. [fe-ru-mĩ] [B1SG-father-DIM] ‘my daddy’). There are also a limited number of words that bear non-final stress. Some examples include [óya] ‘house’, [héra] ‘name’, and [táva] ‘town’. To this list, we should also add some Spanish loanwords such as [letrádo] ‘sneaky’, [víro] ‘silly’, [γʷápo] ‘hard-working’, etc. which have preserved their original stress pattern.

Since stress in Guaraní is typically word-final, only deviations from this general pattern are indicated in writing (e.g., so’o [soʔo] ‘meat’ vs. óga [óya] ‘house’). Also, as inherently nasal vowels normally occur in stressed syllables, they are not marked for stress. Compare the orthographic stress marking in (3a) with that of (3b) below. Note that the nasal quality of [õ] in [õ-se-ta] (3b) results from its occurrence in a nasal harmony domain.

(3) a. Okýma.
   o-kí-mã
   a3-rain-PRF
   ‘It’s started raining already.’ (1b7kr027)

b. Peru osêta.
   peru   õ-se-ta
   Pedro a3-leave-FUT
   ‘Pedro is going to leave.’ (1btlm016)

Also, nasal vowels which are preceded immediately by a nasal stop do not receive orthographic nasal marking (e.g., kuña [kũňa] ‘woman’). Those sounds of Guaraní whose spelling might not be straightforward to the reader are given in Table 2.3 below along with their corresponding graphemes.
Table 2.3 Sound Symbol Correspondences

<table>
<thead>
<tr>
<th>Sound</th>
<th>Symbol</th>
<th>Example</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>ñ</td>
<td>ŋ</td>
<td>kuña [kũną]</td>
<td>woman</td>
</tr>
<tr>
<td>η</td>
<td>ġ</td>
<td>ko’áãa [koʔããa]</td>
<td>now</td>
</tr>
<tr>
<td>ηʷ</td>
<td>ġu</td>
<td>haãuã [hãũʷã]</td>
<td>in order to</td>
</tr>
<tr>
<td>ꢀw</td>
<td>gu</td>
<td>guasú [γʷasú]</td>
<td>big</td>
</tr>
<tr>
<td>ꢁw</td>
<td>ku</td>
<td>kuehe [kʷehé]</td>
<td>yesterday</td>
</tr>
<tr>
<td>i</td>
<td>y</td>
<td>ype [ipé]</td>
<td>duck</td>
</tr>
</tbody>
</table>

Metrical feet are built in Guarani in an iambic pattern at the right most edge of words, as shown in Figures 2.1 and 2.2 below.\(^{29}\) This is assuming that stressless suffixes are extrametrical.

\(^{29}\) The term “iambic foot” refers to a metrical constituent consisting of two syllables arranged in an unstressed-stressed pattern. The most prominent element in a foot is called the head.
A comparison of the above figures shows that Guaraní is a quantity-insensitive language in which the weight distinction between heavy and light syllables is irrelevant for foot construction. In this respect, Guaraní represents an atypical case since generally languages with iambic feet insist on having a heavy syllable as the prominent element of their iambs (see Hayes, 1995).

One of the aspects of Guaraní phonology relevant to our discussion of reduplication in Chapter 3 is its nasal harmony, which has attracted a lot of attention in the literature (Goldsmith, 1976; Gregores & Suarez, 1967; Humbert & Piggott, 1997; Leben, 1973; Lunt, 1973; Walker, 1999). Two patterns of nasal harmony can be identified in the language: a general pattern of regressive harmony and a restricted pattern of progressive nasal spread which affects only certain suffixes and postpositions. In the first general pattern, nasality is triggered by inherently nasal vowels, which typically occur as the nucleus of a stressed syllable in the root-final position, and spreads reggressively, affecting voiced segments within the word (voiceless segments are transparent). There is a negative correlation between the distance of targets from the trigger in a nasal harmony domain and their degree of nasality; i.e., the farther away a target is from the trigger, the less nasalized it will be (see Lunt, 1973). The harmonic domain is blocked by oral vowels functioning as the nucleus of a stressed syllable.
(4) a. /o-mbo-pê/ [A3-CAUS-break] → ò-mô-pê
   b. /o-dże-kitî/ [A3-PASS-cut] → ò-nê-kitî

It is worth noting here that, besides nasal vowels, pre-nasalized stops also trigger nasal harmony.


In addition to the general regressive pattern, there is also a morphologically restricted nasal harmony pattern which spreads progressively and affects only certain suffixes and clitics, most notably the totalitive suffix [-pa] and optionally the clitic [-pe] in contemporary Guaraní.

(6) a. /mitâ=pe/ [child=to] → mîtê=mê
   b. /hoʔisã-pá/ [cold-TOT] → hôʔisã-mbá

Pre-nasalized stops do not trigger progressive nasal harmony.

(7) oré rô-hêndu-pa-ité si-mî
    1PL.E A1PL.E-hear-TOT-very mother-DIM

‘We totally hear you, mom.’ (T31a.033)

In cases where the trigger occurs in a suffix, nasality spreads only progressively (e.g., [si-mî] in (7) above). Consider also the following example.

(8) /kure-râ-pe/ → kure-râ-mê (Tonhauser, 2006, p. 130) (IPA transcription is mine)

Nasality is a distinctive feature in Guaraní phonology when it occurs in stressed syllables, as demonstrated by the minimal pairs in Table 2.4 below.

<table>
<thead>
<tr>
<th>Word</th>
<th>pitá</th>
<th>pîtâ</th>
<th>pirü</th>
<th>pîrû</th>
<th>potî</th>
<th>pôtî</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gloss</td>
<td>stay</td>
<td>red</td>
<td>replace</td>
<td>step on</td>
<td>defecate</td>
<td>clean</td>
</tr>
</tbody>
</table>

In the following section, we will take a brief look at some of the aspects of Guaraní morphology.
2.3 Morphology

If we wanted to locate Guaraní on the synthesis scale, it would have to be at the synthetic (as opposed to analytic) end of the continuum as the role of morphology in the organization of the language is crucial. In this section, we will briefly consider the use of the morphological processes of affixation (both inflectional and derivational) and compounding in Guaraní. (All the examples given in this section are transcribed according to the orthographic conventions of Guaraní presented in Section 2.2.)

2.3.1 Inflectional categories

2.3.1.1 Agreement

Agreement in Guaraní is marked on predicates by either of two sets of prefixal agreement (or cross-reference) markers, depending on the lexical category of the predicate. Following Tonhauser (2006), I will refer to these predicate classes as “Stative” and “Dynamic”. Dynamic predicates generally include concepts that are expressed by verbs in English (e.g., o-guata [A3-walk], o-po [A3-jump], o-ñe’ê [A3-speak], etc.). However, it must be noted here that the use of the term “Dynamic predicates” does not mean that such predicates necessarily express dynamic situations, a semantic notion which usually appears in discussions of aspect. Thus, although many of the situations that Dynamic predicates in Guaraní denote are dynamic, there are some Dynamic verbs that refer to static situations (e.g., o-reko [A3-have], o-pyta [A3-be located]). In order to avoid this terminological confusion, we print the initial letter of “dynamic” and “stative” in upper case whenever these terms refer to the two predicate classes of Guaraní. As opposed to Dynamic predicates which typically correspond to verbs in English, Stative predicates can have as their English equivalents verbs (e.g., i-mandu’a [B3-remember]), adjectives (e.g., i-porâ [B3-}
beautiful]) or nouns (e.g., *i-mimby* [B3-flute] ‘have a flute’). These two predicate classes can be distinguished based on their co-occurrence with either Set A or Set B prefixes (Tonhauser’s (2006) labels for the two sets of agreement markers presented in tables 2.5 and 2.6 below). Note that the prefixes of Set B are also used to mark pronominal possessors on nouns (e.g., *che-jagua* [B1SG-dog] ‘my dog’).

**Table 2.5 Set A Agreement Prefixes**

<table>
<thead>
<tr>
<th>Person</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prefix</td>
<td>Gloss</td>
</tr>
<tr>
<td>1</td>
<td>a(i)-</td>
<td>A1SG</td>
</tr>
<tr>
<td></td>
<td>ja(i)-</td>
<td>(INCL)</td>
</tr>
<tr>
<td>2</td>
<td>re(i)-</td>
<td>A2SG</td>
</tr>
<tr>
<td>3</td>
<td>o(i)-</td>
<td>A3</td>
</tr>
</tbody>
</table>

**Table 2.6 Set B Agreement Prefixes**

<table>
<thead>
<tr>
<th>Person</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prefix</td>
<td>Gloss</td>
</tr>
<tr>
<td>1</td>
<td>che(i)-</td>
<td>B1SG</td>
</tr>
<tr>
<td></td>
<td>ñande-</td>
<td>(INCL)</td>
</tr>
<tr>
<td>2</td>
<td>nde(i)-</td>
<td>B2SG</td>
</tr>
<tr>
<td>3</td>
<td>i-</td>
<td>B3</td>
</tr>
</tbody>
</table>

Table 2.7 below gives the paradigm of independent personal pronouns of Guaraní. However, it must be noted here that the rich agreement-marking system of this language makes it possible to omit these pronouns, as is typically the case in naturally-occurring speech.
Table 2.7 Paradigm of the independent personal pronouns of Guaraní

<table>
<thead>
<tr>
<th>Person</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>che</td>
<td>ore (EXCL)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ñande (INCL)</td>
</tr>
<tr>
<td>2</td>
<td>nde</td>
<td>peē</td>
</tr>
<tr>
<td>3</td>
<td>ha’ē</td>
<td>ha’ekuēra</td>
</tr>
</tbody>
</table>

Stative predicates only appear with Set B markers, but Dynamic verbs can co-occur with the prefixal morphemes of either set. The S argument of intransitive Dynamic predicates is marked on the verb by Set A markers, and so is the A argument of their transitive counterparts (abbreviatory argument labels S, A, and O are taken from Dixon 1979). In Example (9) below, we observe that the intransitive Dynamic predicate *o-ñani* [A3-run] bears the Set A third person agreement marker, thus showing agreement with its sole core argument (i.e., the third person singular pronoun *ha’ē*). The Dynamic predicate *a-johēi* [A1SG-wash] in (10), however, has both an A and an O argument and, in this case, the Set A first person singular prefix *a-* is attached to the verb stem to mark agreement between the predicate and it’s A argument (more on marking agreement on transitive verbs below).

(9) Ha’ē o-ñani pya’e.
\[3SG \text{ A3-run fast}\]
‘He ran fast.’ (1batn004)

(10) A⊥-johēi rēhē.
\[A⊥1SG \text{ wash}\]
‘He washed.’ (1batn004)

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30 The label S refers to intransitive subjects, A to transitive subjects, and O to transitive objects. It is worth noting here that since there is not enough convincing evidence to warrant categorizing the core arguments of verbs in Guaraní based on an opposition between the grammatical relations subject and object, I avoid using these terms in the present work (see Vellázquez-Castillo (2002) for a detailed analysis of grammatical relations in Guaraní).

31 Since only the future tense is marked on Guaraní verbs, clauses without an overt temporal adverb can be interpreted as either past or present depending on the context in which they occur.
The agreement markers of Set B, on the other hand, mark the S argument of intransitive Stative predicates as well as the O argument of transitive Dynamic verbs.\(^{32}\) This is illustrated in example (11) below with the Stative verb *karape* ‘short’ and the Set B first person singular prefix *che*.

(11) Che che-karape.
1SG B1SG-short
‘I am short.’ (19sms007)

Note that since each predicate can take only one agreement marker, a choice needs to be made as to which one of the (A or O) arguments must be marked on a transitive verb. This is determined by the following person hierarchy: 1 > 2 > 3. Hence, in a sentence with a first person A argument and a third person O argument, the verb takes the prefix *a*- which marks the first person singular A argument of Dynamic predicates. This is demonstrated by the following example.

(12) A-hecha chupe.
A1SG-see to.him
‘I see him.’ (1a3kr015)

However, if the A argument is third person singular and the O argument first person singular (i.e., the mirror image of the above example), what is marked on the verb will be the O rather than the A argument.

(13) Ha’e che-recha.
3SG B1SG-see
‘He sees me.’ (1a3kr016)

\(^{32}\) Stative predicates in Guarani are intransitive.
In a similar pattern, we observe in (14) that the predicate *pei-su’u* [A2PL-bite] agrees with its A argument, which is higher on the person hierarchy than the O argument *chipa* ‘bread’.

(14) Pe’ê pei-su’u pe chipa.
   2PL A2PL-bite that bread
   ‘You guys bit the bread.’ (19skr039)\(^{33}\)

There is a subgroup of Stative predicates which never take the Set B third person agreement marker *i*-*, but are instead marked with the relational prefix *h*-*. These predicates, commonly referred to as “alternating” or “oscillating” predicates, are marked with both Set B agreement markers and a second relational prefix *r*- in their non-third person inflected forms.

The inflectional paradigm of the non-oscillating Stative verb *karape* ‘short’ is given in Table 2.8 below. Table 2.9 shows the inflected forms of the oscillating verb *asy* ‘sick’.

Table 2.8 The Inflectional Paradigm of Karape

<table>
<thead>
<tr>
<th></th>
<th>B1SG-short</th>
<th>ore-karape</th>
<th>B1PL.E-short</th>
</tr>
</thead>
<tbody>
<tr>
<td>che-karape</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i-karape</td>
<td>B3-short</td>
<td>i-karape</td>
<td>B3-short</td>
</tr>
</tbody>
</table>

Table 2.9 The Inflectional Paradigm of Asy

<table>
<thead>
<tr>
<th></th>
<th>B1SG-R-sick</th>
<th>ore-r-asy</th>
<th>B1PL.E-R-sick</th>
</tr>
</thead>
<tbody>
<tr>
<td>che-r-asy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>nde-r-asy</td>
<td>B2SG-R-sick</td>
<td>pende-r-asy</td>
<td>B2PL-R-sick</td>
</tr>
<tr>
<td>h-asy</td>
<td>H-sick</td>
<td>h-asy</td>
<td>H-sick</td>
</tr>
</tbody>
</table>

\(^{33}\) Note that in addition to the determiner *pe* which can function as both a middle distance demonstrative and a definiteness marker, there is also a postposition =*pe* in Guaraní which is used to mark animate O arguments of transitive verbs, the recipient in ditransitive clauses and some spatial and temporal adverbs (see Shain & Tonhauser, 2011; Tonhauser, 2006).
In addition to the above agreement markers and relational prefixes, there are two other prefixal morphemes which ought to be mentioned here: ro(i)- and po(i)-. These portmanteau prefixes occur on Dynamic predicates and indicate a first person (singular or plural) A argument acting on a second person O argument. The prefix ro(i)- is used when the O argument is singular while po(i)- marks a plural O argument.

(15) Ro-HENDU.

1.2sg-hear

‘I hear you.’ (1a5kr028)

(16) Po-hecha kuri che ké=pe.

1.2PL-see PAST B1SG sleep=to

‘I saw you guys in my dreams.’ (1b2kr020)

2.3.1.2 Negation

Guaraní uses the circumfix nd(a)-...-i to mark negation on both Stative and Dynamic predicates, as demonstrated by the following pairs of examples.

(17) a. Che-r-asy.

B1SG-R-sick

‘I am sick.’ (1akse018)

b. Nda-che-r-asý-i.

NEG-B1SG-R-sick-NEG

‘I am not sick.’ (1akse019)

(18) a. Ha’ekuéra o-guata hína.

3PL A3-walk PROG

‘They are walking.’ (1akse020)

b. Ha’ekuéra nd-o-guatá-i.

3PL NEG-A3-walk-NEG

‘They are not walking.’ (1akse021)

Note that the pre-nasalized stop [nd] becomes fully nasalized when it appears in a nasal span (see Section 2.2 for a brief discussion of nasal harmony in Guaraní).
   A1SG-die
   ‘I am dying.’ (1akse008)

   b. Che n-a-manó-i.
   1SG NEG-A1SG-die-NEG
   ‘I am not dying.’ (1akse009)

2.3.1.3 Imperative mood

Dynamic verbs may be inflected for the imperative mood using one of the two imperative prefixes of Guarani. The prefix e- is used for singular and pe- for plural addressees.

(20) Pe arasa hi-’aju-rô e-jogua.
   that guava B3-ripe-COND IMP.SG-buy
   ‘If the guava is ripe, buy it!’ (1b7js018)

(21) Pe-maña che=rehe.
   IMP.PL-look B1SG=at
   ‘Look at me!’ (1c5kr012)

2.3.1.4 Optative t-

The optative prefix t(a)- can be used with both Stative and Dynamic predicates to express a (non-counterfactual) wish or desire (22, 23) or as an indirect imperative (24).

(22) Ta- pytá-na che ko’á=pe34.
   OPT-stay-NA 1SG here=to
   ‘I had better stay here.’ (232tn022)

(23) E-ha’arô ta-che-mandu’a.
   IMP.SG-wait.for OPT-B1SG-remember
   ‘Wait so I can remember.’ (232tn020)

(24) E-re chupekuéra t-o-sê Paraguái=gui.
   IMP.SG-say to.them OPT-A3-leave Paraguay=from
   ‘Tell them to leave Paraguay.’ (Sept. 6, 2013)

34 The suffix –na might be an imperative strenghtener.
2.3.1.5 Future -\(ta\)

The suffix -\(ta\) occurs on both Stative and Dynamic predicates, expressing the occurrence of a given situation in the future of a relative or absolute reference time. Thus, verbs marked with this suffix can be considered to have been inflected for future tense. However, it must be noted here that Tonhauser (2011) considers -\(ta\) as a marker of prospective aspect rather than a tense suffix.

(25) Che a-há-ta che-jarýi róga=pe.

1SG A1SG-go-FUT B1SG-grandmother house=to

‘I will go to my grandmother’s house.’ (1arsp049)

(26) A-há-ta kuri a-jogua che-renda-guã, péro o-u

A1SG-go-fut PAST A1SG-buy B1SG-mount-for but A3-come

che-visita che-sy.

B1SG-visit B1SG-mother

‘I was going to buy myself a horse, but my mother came to visit me.’ (27ckr047)

2.3.1.6 Unrealized aspect -\(mo’ã\)

The suffix -\(mo’ã\) can occur on Stative or Dynamic predicates to mark the failure of an intended or predicted/expected situation to realize.

(27) Ha’e o-u-mo’ã.

3SG A3-come-UNREAL

‘She planned to come (but didn’t).’ (1cfkr022)

(28) Che-r-asymo’ã ha a-ñe-pohano.

B1SG-R-sick-UNREAL and A1SG-REFL-medicate

‘I was starting to get sick, but I took medicine.’ (1cfkr030)

2.3.1.7 Completive aspect -\(pa\)

The suffix -\(pa\) indicates the completion or termination of the situation denoted by a given predicate (see Tonhauser, 2006).
(29) Pe óga o-kai-pa-ite.
that house A3-burn-TOT-very
‘The house completely burned down.’ (1b2tn011)

(30) A-pinta-pá-ma pe ogyke.
A1SG-paint-TOT-PRF that wall
‘I have already finished painting the wall.’ (1b2tn002)

As Tonhauser (2006) points out, the notion of “completeness” expressed by -pa naturally involves complete affectedness of the semantic patient of the sentence. This should be clear from (29) and (30) above, but consider also the following example.

(31) Che-rete-rasy-pa.
B1SG-body-sick-TOT
‘My body hurts all over.’ (1apjs008)

In cases where a plurality of participants are involved in a situation, the occurrence of -pa on the verb denoting that situation indicates that the entire set of participants either instigated the situation or was affected by it.

(32) Ore ro-va-pa upépe, péro petei pueblo-’i
1PL.3 A1PL.E-move-TOT there but one village-DIM
michi-mi=nte upéa.
small-DIM=only that.one
‘We all moved there, but it was just a small village.’ (T08.007)

(33) Pe ka’i ho-’u-pa umi pakova.
that monkey A3-eat-TOT those banana
‘The monkey ate all the bananas.’ (38qkr012)

This suffix can also be used as a marker of emphasis.

(34) Che-kangy-pa.
B1SG-tired-TOT
‘I’m totally out of energy.’ (b2tn010)
2.3.1.8 Perfect aspect -ma

The occurrence of –ma on Guaraní predicates yields a perfect interpretation, as demonstrated by the following examples.35

(35) Ha-’u-pá-ma la chipa.
   A1SG-eat-TOT-PRF DET bread
   ‘I have already eaten the bread.’ (1aptn011)

In addition to the perfect interpretation of predicates with -ma exemplified above, Tonhauser (2006, pp. 270-271) identifies two other readings associated with this suffix: inceptive and prospective. An inceptive reading is one in which reference is made to “the inception of the eventuality” (36), whereas a prospective interpretation denotes “a potential transition from the pre-state to the eventuality itself” (37).

(36) O-ký-ma.
    A3-rain-PRF
    ‘It’s started raining.’ (1b7kr027)

(37) A-há-ta-ma.
    A1SG-go-FUT-PRF
    ‘I’m going to go (soon).’ (1arsp043)

2.3.2 Derivational affixes

In this section, we will look at a few derivational affixes that appear on Guaraní Stative and Dynamic predicates.

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35 Although we are considering -ma as an inflectional suffix for the purposes of the present discussion, perhaps it would be more appropriately categorized as some kind of aspectual clitic since, in addition to predicates, it can occur on nominal and adverbial expressions, as illustrated below.

Tres semána-ma a-mbo-jy-hague pan.
three week-PRF A1SG-CAUSE-cooked-PAST.SUBORD bread
‘Three weeks ago I baked bread.’ (1bndh017)

Ko’ága-nte-ma o-ñe-hundi-pa.
now-only-PFR A3-PASS-destroy-TOT
‘(But) now it’s all gone.’ (T34a.087)
2.3.2.1 Passive/reflexive je-

The prefix *je-* (ñe- inside a nasal span) can be used with transitive Dynamic predicates to form passive constructions.

(38) Pe hárro o-je-joka.
    that cup A3-PASS-break
    ‘The cup was broken.’ (1arsg031)

(39) A-je-su’u kuri.
    A1SG-PASS-bite past
    ‘I was bitten.’ (1bnkh002)

(40) Ramón o-ñe-mbuepoti kuri.
    Ramon A3-PASS-hit past
    ‘Ramon got hit.’ (1bnkh005)

Note that the same prefix may be used to form impersonals (41) and reflexives (42).

(41) I-katu o-je-gasta un million de dólares
    B3-possible A3-REFL-spend one million of dollars
    peteĩ pyharê=pe.36
    one night=to
    ‘It is possible to spend a million dollars overnight.’ (1bnkh021)

(42) Ñande ja-je-johéi Ñande-jupe.
    1PL.I A1PL.I-REFL-wash B1PL.I-self
    ‘We washed ourselves.’ (1aqdh005)

2.3.2.2 Reciprocal jo-

The reciprocal prefix *jo-* (ñó- in a nasal span) can co-occur with Dynamic predicates whose A argument is interpretable as plural.

(43) Ha ore ro-jo-haihu, ro-jo-haihu eterei enseguida
    and 1PL.E A1PL.E-RECP-love A1PL.E-RECP-love very immediately
    voi.
    right.away
    ‘And we loved each other, loved each other so much right away.’ (T14.007)

36 The italicized part of the sentence represents code switching from Guaraní to Spanish.
2.3.2.3 Causative mbo-

The derivational prefix mbo- (mo- in a nasal harmony domain) attaches to intransitive predicates and increases their valency, as demonstrated by the following examples.

(45) a. Pe mitã-mi h-asê.
   that child-DIM H-cry
   ‘The baby is crying.’ (19thz022)

b. Peru o-mo-h-asê Luis=pe.
   Pedro A3-CAUS-H-cry Luis=to
   ‘Pedro made Luis cry.’ (1boms001)

(46) a. Che-pochy hese.
   B1SG-angry at.him
   ‘I am mad at him.’ (26mvc064)

b. Peru katuetei che-mbo-pochy jepi.
   Pedro always B1SG-CAUS-angry repeatedly
   ‘Pedro is always bugging me.’ (1bskr042)

This prefix can also be attached to nouns to derive verbs, as illustrated by the following example.

(47) irũ ‘companion’ → mo-irũ ‘accompany’
   Ha’e ne-moirũ-ta, mama, anichêne nde-reja.
   3SG B2SG-go.with-FUT mom NEG.UNCERT B2SG-leave
   ‘She will keep you company, mom, she won’t leave you.’ (T33c.009)

2.3.2.4 Causative -uka

Transitive verbs can also be causativized, using the suffix -(u)ka. The A argument of the original transitive verb is marked with the postposition -pe (or any of its allomorphs).
(48) Ramon o-hech-uka pe jagua Mariá=pe.
Ramon A3-see-CAUS that dog Maria=to
‘Ramon showed the dog to Maria.’ (1apkh007)\(^{37}\)

(49) a. Ha´u pe chipa.
A1sg-eat that bread
‘I’m eating the bread.’ (1aokr032)

b. Mba´ê=iko che ha´u-ká-ta chu=pe.
what=Q 1SG A1SG-eat-CAUS-FUT 3=TO
‘What am I going to feed her?’ (T34a.047)

2.3.2.5 Desiderative -se

The desiderative suffix -se can occur on both Stative and Dynamic predicates to express the desire of the S or A argument for the situation denoted by the predicate to occur. It is typically translated into English as “want”.

(48) Che ha´u-se pe chipa.
1SG A1SG-eat-DES that bread
‘I want to eat the bread.’ (1aokr029)

(49) Che-yvate-se.
B1SG-tall-DES
‘I want to be tall.’ (1aokr042)

2.3.2.6 Mitigative -vy

The derivational suffix –vy may appear with both Stative and Dynamic predicates, moderating their meaning. It can normally be translated into such English attenuative expressions as “a little”, “somewhat”, “kind of”, etc.

(50) Che-aká-nundu-vy hína.
B1SG-head-throb-MIT PROG
‘I have a mild fever.’ (25okr024)

\(^{37}\) The initial [u] of [-uká] often coalesces with the final vowel of the stem. Thus, in this example o-hecha-uka [o-heʃja-uká] is realized as o-hech-uka [o-heʃ-uká].
2.3.2.7 Comparative -ve

The suffix -ve is used with Stative predicates denoting gradable qualities to form comparative constructions. The expression denoting the standard or reference of comparison typically occurs with the clitic =gui ‘from’.

(53) I-japu-ve Perurimá=gui.
    b3-lie-more Perurima=from
    ‘He is a bigger liar than Perurima.’ (22rkr004)

(54) I-juru-guasu-ve jakaré=gui.
    b3-mouth-big-more crocodile=from
    ‘He has a bigger mouth than a crocodile.’ (22rkr008)

With Dynamic predicates, -ve serves as a sort of intensifier.

(55) A-ha-rõ eskuéla=pe che a-ñe-mo-arandu-vé=ta.
    A1SG-go-COND school=to 1SG A1SG-REFL-CAUS-knowledge-more-FUT
    ‘If I go to school, I will become educated even more.’ (1bojs001)

(56) Pe méskla=pe e-moî-ve hína la ñandy ha that mixture=to IMP.SG-put-more PROG DET lard and
    re-moî-ve hína la ryguasu rupi’a.
    A2SG-put-more PROG DET chicken egg
    ‘Into the mixture you put in more lard and more eggs.’ (T30.088)

(57) Nd-o-ky-vé-i-ma.
    NEG-A3-rain-more-NEG-PRF
    ‘It is not raining anymore.’ (1b7kr026)

2.3.3 Compounding

Another derivational process used in Guaraní morphology besides affixation is compounding. Both noun-noun and noun-verb compounds occur in the language. Some

Guaraní N-V compounds can be divided into two groups: those derived from a Stative verb and a nominal dependent, and those derived from a Dynamic verb and a nominal dependent. The N-V compound akã-rasy ‘have a headache’ in (58) below is derived from the Stative verb rasy ‘be sick’ and the noun akã ‘head’.

(58) Che-akã-r-asy.
B1SG-head-R-sick
‘I have a headache.’ (1b2kr048)

We can see in example (59) below that the nominal dependent of a verb-headed N-V compound may itself be a complex word.

(59) Che-akã-rague-puku.
B1SG-head-hair-long
‘I have long hair.’ (21bkh003)

The N-V compound in the above example is derived from the Stative verb puku ‘long’ as the head of the compound and the compound noun akã-rague [head-hair]. An example of a verb-headed N-V compound derived from the Dynamic verb pete ‘smack’ and the noun tova ‘face’ is given in (60) below.

(60) A-je-hova-pete   ange   pyhare jeroky-há=pe.
A1SG-PASS-face-smack recently night dance-NMLZ=to

‘I was slapped in the face last night at the dance.’ (21bkh038)
Note that in the above example the compound verb *hova-pete* has been passivized by the prefixal passive morpheme *je-*.

### 2.4 Basic syntax

Guaraní exhibits free word order; however, SVO is particularly common in isolated clauses and thus may be considered the unmarked constituent order. As was mentioned in 2.3.1.1, Guaraní is a pro-drop language in which the occurrence of pronominal S and A arguments is optional. (All the examples given in this section are transcribed according to the orthographic conventions of Guaraní presented in Section 2.2.)

(61) a. Che a-hecha pe jagua.  
1SG A1SG-see that dog  
‘I saw the dog.’ (27bkr025)

b. Pe jagua a-hecha che. (27bkr026)

c. A-hecha pe jagua che. (27bkr027)

d. A-hecha che pe jagua. (27bkr028)

e. Che pe jagua a-hecha. (27bkr029)

f. Pe jagua che a-hecha. (27bkr030)

Similarly, the S argument of intransitive verbs, whether Stative or Dynamic, often occurs before the verb; however, it is also possible for the verb to precede its S argument. Examples (62) and (63) below illustrate the typical SV word order using the Dynamic verb *guata* ‘walk’ and the Stative verb *porã* ‘good/beautiful’.

(62) Kuehe ka’aru Peru o-guata hína kuri tape  
yesterday afternoon Pedro A3-walk PROG PAST road  
po’i=re. narrow=at  
‘Yesterday afternoon, Pedro was walking along a trail.’ (1b9kr033)
Observe, however, that in the following example the pronominal S argument of the Dynamic intransitive verb *iko* ‘live’ follows the verb, rather than preceding it.

(64) Nd-o-ikó-iri upéa.
NEG-A3-live-NEG that.one
‘He is not good at what he does.’ (1cfkr041)

Likewise, in (65) below the S argument of the Stative verb *porã* appears after the verb.

(65) I-porã la che-táva.
B3-beautiful DET B1SG-town
‘My town is beautiful.’ (T07.027)

In the agreement-marking system of Guaraní, the S argument of Stative predicates is marked on the verb with the same set of agreement prefixes as the O argument of Dynamic transitives while the S argument of Dynamic intransitives and the A argument of Dynamic transitives group together in terms of their occurrence with a second set of agreement markers (see examples in 2.3.1.1). This differential marking of the S argument of intransitive verbs characterizes Guaraní as a split-S language.

Guaraní noun phrases consist minimally of a noun, as shown in (66) below, but can be expanded by both pre-nominal and post-nominal modifiers.

(66) … e-moî-sé-ramo kamby.
IMP.SG-put-DES-COND milk
‘… add milk if you like.’ (T30.044)

Determiners and quantifiers normally occur before the noun they modify, as illustrated by the following examples.

(67) Ne-mandu’á=ke re-ru hağua la kamby.
b2sg-remember=imp a2sg-bring in.order.to det milk
‘Remember to bring the milk.’ (26mvc036)
We can see in the following examples that the demonstratives *ko* ‘this’ and *pe* ‘that’ also precede the noun they modify. Note that *pe* often functions as a definite article.

(69) Ko  ita  i-pohyi-eterei.  
this  rock  b3-heavy-very  
‘This rock is very heavy.’ (1b2kh007)

(70) Pe  jagua  oi-su’u  pe  mbarakaja.  
that  dog  b3-bite  that  cat  
‘The dog bit the cat.’ (19skr031)

Also, in possessive constructions, the noun referring to the possessor precedes the noun which refers to the possessum.

(71) a. vaka  rati  
cow  horn  
‘a cow’s horn’ (237kr012)

b. Peru  reindy  
Pedro  sister  
‘Pedro’s sister’ (Oct. 31, 2013)

Pronominal possessors are expressed by Set B prefixes on the noun which refers to the possessum.

(72) a. che-jagua  
b1sg-dog  
‘my dog’ (19qkr006)

b. ore-jagua  
b1pl.e-dog  
‘our (excl) dog’ (19qkr014)

Note that in Guaraní orthography Set B prefixes marking possession on nouns are often separated from the noun referring to the possessum (e.g., *che jagua* ‘my dog’).
Attributive adjectives occur post-nominally, as demonstrated by the following example.

(73) O-japo óga pyahu, klínika.
A3-make house new clinic
‘She built a new building, a clinic.’ (T34a.214)

In order for an adjective to be further modified, it needs to occur as the predicate of a relative clause, as shown in (85) in the following paragraph.

Relative clauses are post-nominal and externally-headed. They are marked by the suffix –va or, if they are past relative clauses, by -va’ekue.

(84) E-jagarra oimeraẽ mba’e rei-potá-va.
IMP.SG-take some thing A2SG-want-REL
‘Take anything you want.’ (1b1kr015)

(85) Ha umi ao i-ky’a-ité-va, o-ime o-jagarra
and those clothing B3-dirty-very-REL A3-be A3-take
o-johéi hína.
A3- wash PROG
‘And there were those very dirty clothes, and she took them, and she is washing them.’
(T24.030)

In the example below, the relative clause following the noun karai ‘man’ describes a past situation and is thus marked with -va’ekue.

(74) Pe karai a-hecha-va’ekue kuehe o-ho hóga=pe.
that man A1SG-see-REL.PAST yesterday A3-go 3.house=to
‘The man that I saw yesterday went home.’ (1b3sg003)

Headless relative clauses also occur in the language.
Both bare complement clauses and complement clauses with overt subordinators can be identified in Guaraní. Some verbs which occur with bare complement clauses include \textit{katu} ‘possible’, \textit{ñepyru} ‘begin’, \textit{ñehe’a} ‘try’ and \textit{pota} ‘want’.

However, in the following example, the verb \textit{he’i} ‘say’ takes a complement clause with the suffixal subordinator -\textit{ha}.

\begin{itemize}
  \item \textbf{(75)} \textit{Ei-potá-va} o-reko hikuái.
    \text{IMP.SG-want-REL A3-have 3PL}
    \text{‘They have whatever you want.’ (T29.099)}
  \item \textbf{(76)} \textit{Ai-katú-ma} a-ñepyru a-mba’apo.
    \text{A1SG-possible-PRF A1SG-begin A1SG-work}
    \text{‘Now I’m allowed to start working.’ (T06.012)}
  \item \textbf{(77)} \textit{He’i} chéve o-mbo’e-ha Guaraní.
    \text{3.say to.me A3-teach-SUBORD Guaraní}
    \text{‘He said he teaches Guaraní.’ (1ajtn005)}
  \item \textbf{(78)} \textit{Che-mandu’a} nde-r-asy-hague.
    \text{B1SG-remember B2SG-R-sick-SUBORD.PAST}
    \text{‘I remember that you were sick.’ (1avkr026)}
\end{itemize}

The verb in a past-time complement clause takes the suffix -\textit{hague}.

\begin{itemize}
  \item \textbf{(79)} A-reko peteš véka kuri péro Paraguái=pe.
    \text{A1SG-have one scholarship PAST but Paraguay=to}
    \text{‘I had a scholarship, but in Paraguay.’ (T06.030)}
  \item \textbf{(80)} Che chemandu’a a-kyhyje va’ekue Jasyjateré=gui,
    \text{1SG B1SG-remember A1SG-scare REMOTE.PAST Jasyjatere=from}
    \text{o-së-va asaje. A3-leave-REL siesta}
    \text{‘I remember I used to be afraid of Jasyjatere, who comes out at siesta time.’ (T09.002)}
\end{itemize}
2.5 Summary

Paraguayan Guaraní is a Tupí-Guaraní language spoken by about four million people in Paraguay and neighboring areas in Brazil and Argentina. It is a synthetic language with a rich system of inflectional and derivational morphology. In general, agreement and voice are marked on verbs with prefixes, whereas subordination and some of the tense/aspect/mood distinctions are marked with suffixal morphemes (other tense/aspect/mood categories are expressed by free forms). Besides affixation, Guaraní also uses compounding as a productive morphological process. Word order is basically free, but SVO is preferred in isolated sentences. Verbs are inflected only for the future tense using the suffix -*ta*, with the expression of other temporal distinctions being accomplished by the use of adverbs. In terms of its case marking, Guaraní exhibits a split-S pattern, with the S argument of Stative intransitive verbs being marked with the same set of agreement markers as the O argument of Dynamic transitives, and the S argument of Dynamic intransitives being marked on the verb with the same agreement prefixes as the A argument of transitive verbs.

The Guaraní syllable is of the shape (C)V with the possibility of an optional (V) either preceding or following the nucleus. Stress is often word-final, but non-final stress also occurs. The most prominent characteristic of Guaraní phonology is its nasal harmony in which nasality spreads from inherently nasal vowels, usually in the root-final position, as well as from prenasalized stops to the preceding voiced segments within the word. In addition to this general regressive pattern, there is also a morphologically restricted pattern of nasal harmony which affects only certain affixal morphemes.
3 The structure of Guaraní reduplicative forms

In this chapter, I will demonstrate that Paraguayan Guaraní exhibits both patterns of total and partial reduplication. With the exception of words with monosyllabic roots, fully reduplicated forms in Guaraní include reduplicants that copy the entire root of the original (unreduplicated) word. Where reduplication is partial, the reduplicant typically consists of the last two syllables of the base (although there are cases which do not fit this generalization). The reduplication system in Guaraní is suffixal, with the reduplicant following the base (e.g., [õ-ɲẽ-mõ-mänduʔá] [A3-REFL-CAUS-remember] ‘memorize’, [õ-ɲẽ-mõ-mänduʔà~nduʔá] ‘keep memorizing’; [pětě] ‘one’, [pětě~tě] ‘one by one’).

The choice between total and partial reduplication in Guaraní seems to be a question of dialectal and/or idiolectal difference, with some speakers tending to use partial reduplication and others showing a preference for the total type. For still others this appears to be more like a pattern of free variation rather than a strict dichotomy. This observation, however, is based on my work with only three consultants, and hence should be taken with extreme caution. The variation in the use of total and partial reduplication in Guaraní might also be an extension to the diachronic path, as suggested by Rose (2005), from monosyllabic to disyllabic reduplication in Tupí-Guaraní languages which is now moving towards a full reduplication pattern. According to Rose (2005), although both monosyllabic and disyllabic reduplication were once productive morphological operations in many Tupí-Guaraní languages, the former pattern has now been replaced by the disyllabic one, with its traces being observable through some fossilized forms still in use in these languages. Rose (2005) mentions Wayampi as an example of a language which has undergone this shift from both monosyllabic and disyllabic reduplication to a disyllabic-only pattern and Emerillon as a language in which this process is underway. We can
consider Paraguayan Guaraní as another language to which Rose’s observation applies since the only examples of monosyllabic reduplication found in this language are lexicalized forms such as [kĩɾĩɾĩ] ‘quiet’, [tĩɾĩɾ] ‘crawl’, and [povĩvĩ] ‘scrounge for’. Of course, the distinction between total and partial disyllabic reduplication becomes relevant only in cases where a given root is longer than two syllables. It must be pointed out here, however, that native monomorphemic verb roots in Guaraní are typically disyllabic and very few verb roots in this language exceed two syllables in length. In sections 3.1-3.3 below, we will look at the different reduplication patterns in Guaraní Stative and Dynamic predicates. Section 3.4 is concerned with the reduplication of numerals.

3.1 Total reduplication

As mentioned above, the pattern of total reduplication in Guaraní copies the whole root of the word. However, there is an array of exceptions to this generalization which will be presented and discussed throughout the rest of this chapter. Since Guaraní also displays partial disyllabic reduplication, some of the root forms used as examples in this section as well as in Section 3.2 are chosen to be longer than two syllables so that the distinction between total and disyllabic reduplication can be clearly established. Note that the reduplicative forms in (1) and (3) presented below as full root reduplications will reappear in Section 3.2 as partially reduplicated forms in order to illustrate the variation in the use of these two reduplication types. The Guaraní examples provided in this chapter are transcribed following the orthographic conventions of the language presented in Section 2.2; IPA transcriptions are used only when it is necessary to preserve as much phonetic detail as possible.
In example (1) above, we observe that the reduplicant copies the entire verb root \textit{sapukái} ‘shout’ but excludes the agreement prefix \textit{o}- from the domain of copying. Similarly, the reduplicative form of the Stative predicate \textit{i-karape} in (2) consists only of a copy of the root \textit{karape} to the exclusion of \textit{i}-, the Set B third person marker. Example (3) below exhibits the same pattern of total root reduplication.

In (3) above, the verb root \textit{mandu’a} ‘remember’ in the base of reduplication is preceded by three affixal morphemes: the causative \textit{mo-}, the reflexive \textit{ñe-} and the Set A agreement prefix \textit{o}-.

However, it is only the root that is copied by the reduplicant; none of the three inflectional or derivational prefixes participates in the reduplication operation. The exclusion of prefixal material from the copying domain is also evident in the reduplicated form of the verb \textit{o-mbo-popo} [\textit{A3-CAUS-jump}] in the following example. Note that the root \textit{popo} ‘jump up and down’ is itself a frozen reduplicative form derived from \textit{po} ‘jump’.

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38 Despite the orthographic convention of maintaining the stress mark on the base in reduplicated forms like \textit{sapukái–sapukái} ‘shout’ and \textit{purahéi–rahéi} ‘sing’, the final syllable of the base carries only secondary stress, with primary stress falling on the last syllable of the reduplicant.
It is worth noting here that in Guaraní reduplicated forms the base receives secondary and the reduplicant primary stress. Thus, while stress in the Stative verb [i-kaɾapé] [B3-short] falls on the last syllable of the word, the reduplicative form [i-kaɾapé-karapé] is stressed on the last syllable of the reduplicant, with the final syllable of the base taking on secondary stress. This stress pattern applies to both total and partial reduplication in Guaraní. Of course, as we shall see below, this pattern does not apply to cases where a stress-attracting suffix in a given verb does not participate in reduplication.

The exclusion of material extraneous to disyllabic or longer roots from copying applies to suffixal morphemes as well (although there are some cases that do not fit this general pattern). Consider the following examples.

(5) a. Peru omyañambaite pe pakova ijurupe.
    perú ō-miānã-mba-ité pe paková i-dʒurú=pe
    Pedro A3-push-TOT-very that banana B3-mouth=to
    ‘Pedro pushed the whole banana into his mouth.’ (26lkh056)

    b. Peru omayána myañambaite pe pakova ijurúpe.
    peru o-miānã–miānã-mba-ité pe paková i-dʒurú=pe
    Pedro A3-push~REDUP-TOT-very that banana B3-mouth=to
    ‘Pedro kept trying to push the whole banana into his mouth.’ (26lkh057)

(6) a. Orekyrave ndehegui.
    ore-kira-vé ndeheýʷí
    B1PL..E-fat-more from.you
    ‘We are fatter than you.’ (38qkr082)

    b. Orekyra kyrave ndehegui.
    ore-kira~kira-vé ndeheýʷí
    B1PL..E-fat~REDUP-more from.you
    ‘Each of us is fatter than you.’ (38qkr083)
In (5a) above, the verb stem *o-myāna* ‘push’ is followed by the totalitive suffix *-mba* which is in turn followed by a second suffix, namely the intensive *-ite*. When reduplicated, however, the copy includes only material from the root, with both of the suffixal morphemes being attached to the entire reduplicative complex. This pattern is also evident in *ore-kyra~kyra-ve* (6b) where the comparative suffix *-ve* is not part of the copied material in the reduplicant, but is instead affixed to the reduplicative stem as a whole (*ore-kyra-ve~kyrave, *ore-kyra-ve~rave*). More examples are given below. Note that the suffix –*mo’ā* in (7) indicates unrealized aspect (i.e., the situation denoted by the verb was about to occur but didn’t).

(7) Pe karai tuja oinupā nupāmo’ā kurépe.
   pe  kaɾai  tuʤá  oĩ-nūpā~nūpā-mōʔā  kuré=pe
   that  man  old  A3-hit~REDUP-UNREAL  pig=to
   ‘The old man almost hit the pig frantically.’ (Sept. 6, 2013)

(8) Ikyra kyraite Peru vakakuéra.
   i-kira~kira-ité   perú   vaka-kʷéra
   B3-fat~REDUP-very  Pedro  cow-PL
   ‘Each of Pedro’s cows is really fat.’ (Sept. 6, 2013)

(9) Orepya’e pya’ève chugui.
   ore-piaʔe~piaʔe-vé  ḟuyʷí
   B₁PL.E-fast~REDUP-more  from.him
   ‘Each of us is faster than him.’ (Sept. 6, 2013)

Many verbs in Guaraní are formed by concatenative derivational processes such as compounding and noun incorporation (NI). Some examples are given in Table 3.1 below.
Table 3.1 N-V Compounds

<table>
<thead>
<tr>
<th>Noun</th>
<th>Verb</th>
<th>Compound</th>
</tr>
</thead>
<tbody>
<tr>
<td>juru ‘mouth’</td>
<td>jái ‘open’</td>
<td>juru-jái ‘be amazed’</td>
</tr>
<tr>
<td>kure ‘pig’</td>
<td>juka ‘kill’</td>
<td>kure-juka ‘slaughter pigs’</td>
</tr>
<tr>
<td>mbà’e ‘thing’</td>
<td>‘apo ‘do’</td>
<td>mbà-’apo ‘work’</td>
</tr>
<tr>
<td>po ‘hand’</td>
<td>johéi ‘wash’</td>
<td>po-héi ‘wash hands’</td>
</tr>
<tr>
<td>py’a ‘guts/heart’</td>
<td>pu ‘make a sound’</td>
<td>py’a-py ‘worry’</td>
</tr>
<tr>
<td>ta’anga ‘picture’</td>
<td>‘apo ‘do’</td>
<td>ta’anga-’apo ‘draw, paint’</td>
</tr>
<tr>
<td>tembi’u ‘food’</td>
<td>‘apo ‘do’</td>
<td>tembi’u-’apo ‘cook’</td>
</tr>
<tr>
<td>turu ‘horn’</td>
<td>ñe’è ‘talk’</td>
<td>turu-ñe’è ‘whistle’</td>
</tr>
<tr>
<td>tova ‘face’</td>
<td>pete ‘smack’</td>
<td>hova-pete ‘slap face’</td>
</tr>
<tr>
<td>vaka ‘cow’</td>
<td>juka ‘kill’</td>
<td>vaka-juka ‘slaughter cattle’</td>
</tr>
</tbody>
</table>

Such predicates behave similarly to the ones with simplex underived roots with respect to reduplication in that they exclude affixal material from the reduplicant. In other words, the reduplicated forms of compounds copy either only the final element or both members of the derived form, excluding any affixal morphemes if present. For instance, we observe in the following examples that juru-jái [mouth-open] reduplicates as jurujáí-jurujáí, while in kure-juka [pig-kill] only the verbal head of the compound (i.e., juka) appears in the reduplicant.

(10) Umi karia’ykuéra ijurujáí jurujáí pe kuñataíre.
ũmi kariaʔi-k’éra i-dʒuru-dʒái~dʒuru-dʒái pe kũñataí=re
those man-PL B3-mouth-open~REDUP that young.woman=at
‘Each of the guys was blown away at the sight of the young woman.’ (Aug. 30, 2013)
Rokurejuka juka jepi.
ɾo-kure-dʒukà~dʒuká  dʒepí
A1PL.E-pig-kill~REDUP repeatedly
‘We slaughter pigs from time to time.’ (Sept. 6, 2013)

Although the claim we made above about the presence of a pattern of full root reduplication in Guaraní seems to be generally well-supported, it does not remain unchallenged. Here, we will quickly mention two problematic cases which militate against this claim. First, there are a number of verbs in Guaraní which cannot be reliably analyzed as either simplex or derived. A good example of such verbs is mondoro ‘cut’, which can be reduplicated as both mondoro~mondoro and mondoro~ndoro. Given the fact that Guaraní also has an intransitive verb soro ‘tear’, we can more viably analyze mondoro as a derivative of soro (mbo-soro [CAUS-tear]) rather than as an underived root. Adopting the former analysis, the fact that mondoro can reduplicate as mondoro~mondoro goes against the pattern of full root reduplication proposed above in which no affixal material is expected to be copied by the reduplicant of a base containing a disyllabic or longer verb root.39

Secondly, there are a number of words which have entered the Guaraní lexicon as loanwords from Spanish. Unlike native Guaraní words which are typically stress-final, some of these Spanish loanwords have preserved their original stress pattern and are stressed on their penultimate syllable (e.g., letrádo ‘sneaky’, guápo ‘hard-working’, výro ‘silly’). When reduplicated, these forms copy, not only the root, but also the accompanying prefixal material. In

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39 A similar case would be the verb jeroky ‘dance’, which can be reduplicated as both jeroky~jeroky and jeroky~roky. Although an analysis of jeroky as a reflexive je-roky [REFL-dance] seems plausible, I have not been able to identify roky as a synchronic root in modern Guaraní. Also, the viability of such an analysis is especially weakened by the fact that jeroky can co-occur with the reflexive/passive je- as demonstrated below.
Ojejeroky.
ɾo-je-jeroky
A3-REFL-dance
‘There was dancing going on.’ (39dkr021)
the following examples, compare the reduplicated form of *porã* ‘nice’ and *héra* ‘name’ from Guarani with that of *výro* ‘silly’. Note that in *i-porã* (12), the stress falls on the final syllable, and the stressed syllable in *ore-mbo-héra* (13) is penultimate.

(12) Iporã porã umi mitãkuña.
   ĩ-põrã̃-põrã̃ ũmí mítã-kũńá
   B3-beautiful~REDUP those child-woman
   ‘Each of those young girls is beautiful.’ (22dhk084)

(13) Orembohéra héra hikuái.
   őrẽ-mbo-hērâ-héra hikʷáï
   B1PL.E-CAUS-name~REDUP 3PL
   ‘They gave us each a nickname.’ (38qkr009)

(14) Ivýro ivýro umi arrierokuéra.
   i-víro-ivíro ũmí arieɾo-kʰéra
   B3-silly~REDUP those man-PL
   ‘Each of those guys is silly.’ (Sept. 6, 2013)

Given the identical stress patterns of *héra* and *výro*, it seems unlikely that the divergent behavior of Spanish loanwords with respect to reduplication is due to their pre-final stress locus.

### 3.2 Partial reduplication

The pattern of partial reduplication in Guarani is disyllabic and suffixal; that is, in most cases, the last two syllables of the verb are copied by the reduplicant. Consider the following examples.

(15) Kristína o-ñe-mo-mandû’a~ndu’a kuri umi
    Kristina A3-REFL-CAUS-remember~REDUP PAST those
    yyramata-kuéra h-éra h-asý-va=gui.
    tree-PL H-name H-hard-REL=from
    ‘Kristina kept refreshing her memory on the tough names of the trees.’ (Sept. 6, 2013)
We observe in (15) above that the verb *o-ñe-mo-mandu’a* [A3-REFL-CAUS-remember] consists of the root *mandu’a* plus three prefixal morphemes, but no suffixes. The reduplication operation copies only the last two syllables of the verb which in this case happen to be also the last two syllables of the verb root, thus yielding the reduplicative form *o-ñe-mo-mandu’a~ndu’a*. The verb *o-puka-vy* in (16), on the other hand, consists of the root *puka* ‘laugh’ plus the Set A agreement prefix *o*- and the mitigative suffix –*vy* (translatable to English as something like “a little” or “kind of”). When reduplicated, it is again the last two syllables of the verb that makes up the reduplicant *kavy*. Note, however, that in this case each of the two copied syllables belongs to a different morpheme; that is, the initial syllable [ka] in *kavy* is copied from the root *puka*, whereas [vy] is a copy of the monosyllabic mitigative suffix -*vy*. We find a similar pattern in the following example.

(17) O-ṅakã-’o~kã’o   umi  kure.
    A3-head-remove~REDUP those pig
    ‘They cut the pigs’ heads off one after another.’ (38fkh078)

Assuming that *akã’o* is a denominal verb derived from the noun *akã* ‘head’ and the word class changing eliminative suffix -‘o ‘remove’,\(^\text{40}\) we see in this example too that the reduplicant is a copy of the last two syllables of the stem which do not correspond to a single morpheme (i.e., the final syllable of *akã* plus the monosyllabic suffixal morpheme -‘o). Now consider the following example.

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\(^{40}\) An alternative analysis would be to consider ‘o in *o-ṅakã-’o* [A3-head-remove] as a bound verb root heading an N-V compound.
(18) Pe karai tuja oi-nupã-mo’ã~mo’ã kuré=pe.
that man old A3-hit-UNREAL~REDUP pig=to

‘The old man almost hit the pig several times.’ (Sept. 6)

We observe in the above example that the reduplicant copies the aspectual suffix -mo’ã, which happens to be two syllables long, but no part of the preceding morpheme (i.e., the verb root nupã) is copied. A similar case is that of the verb ho-’u-pa-se (literally translated as ‘they want to eat it up’) which has taken on a metaphoric meaning equivalent to “they are greedy” in English. The reduplicated form of this verb is given in (19b) below.

(19) a. Ho-’u-pa-se.
   A3-eat-TOT-DES
   ‘They are greedy.’

   b. Ho-’u-pa-se~pase.
   A3-eat-TOT-DES~REDUP

   ‘Each of them is greedy’. (Aug. 27, 2013)

We see in this example too that what is copied by the reduplication operation consists only of suffixal material, i.e., the totalitive –pa and the desiderative –se ‘want’, with the root itself being left out of the reduplicant.

The pattern emerging from these examples, and other similar ones, clearly shows that the partial reduplication pattern in Guaraní is driven by a prosodic requirement of disyllabicity. When this disyllabicity constraint can be met by a single morpheme, it is only syllabic units from that morpheme which are copied. However, when a morpheme is not syllabically rich enough to provide the reduplication operation with two syllables, then the onus is on the adjacent morpheme to supply the missing syllabic unit. We shall see in the next section that this constraint
is in fact applicable to the entire reduplication system of the language, rather than being only
limited to partially reduplicated forms.

An important empirical advantage of identifying this disyllabicity requirement on
reduplication is that it allows us to gain insight into the syllabic structure of those Guaraní words
which contain a VV sequence (e.g., purahéi [purahéi] ‘sing’, saingo [sãĩŋó] ‘hang’, mondýi
[mõndiĩ] ‘scare’, etc.). The question that arises as regards such forms is whether the VV
sequence in these words corresponds to two different syllables or the two adjacent vowels are
both part of a single syllabic unit. We can find the answer in the reduplication pattern of the
following examples.

(20) Ha’e opurahéi rahéi.
    haʔé    o-purahèi~rahéi
3SG A3-sing~REDUP
‘He kept singing.’ (24ckh004)

(21) Ikachiãi chiãi hikuái.
    i-kãʃĩà~ʃĩài hikʷái
B3-funny~REDUP 3PL
‘Each of them is funny.’ (Aug. 30, 2013)

Given that the pattern of partial reduplication in Guaraní is disyllabic, the fact that [purahéi] is
reduplicated as [purahèi~rahéi] and [kãʃĩài] as [kãʃĩà~ʃĩài] (*[purahèi~héi], *[kãʃĩà~ãi]) shows
that the Vi sequence in these words is tautosyllabic, with the final high vowel functioning as a
glide. In a form like [piaʔé] ‘fast’ which reduplicates as [piaʔè~piaʔé] (9) (*[piaʔè~aʔé]), the
glide (i.e., the high vowel [i]) actually precedes the nucleus, rather than following it.

Based on the evidence presented above, I consider the Guaraní syllable to have the shape
(C)V with the possibility of an optional high (V) either preceding or following the nucleus. The
tautosyllabicity of VV sequences in forms like [purahéi] ‘sing’ and [kãʃĩài] ‘funny’ characterizes
Guaraní as a quantity-insensitive language in which the contrast between heavy and light
syllables is irrelevant in building metrical feet. Given the fact that feet in Guaraní are iambic, its insensitivity to quantity makes it quite an odd case from a cross-linguistic point of view as languages with iambic feet typically show a strong tendency to have a heavy syllable as the head of their iambics (see Hayes, 1995).

At this point, we must mention an important and intriguing property of reduplication in Guaraní. Consider the following example of reduplication with the verb o-sapukái ‘shout’.

(22) Peru osapuka pukái korapýpe.
perú o-sapukà~pukái korá=pe
Pedro A3-shout~REDUP backyard=to
‘Pedro kept shouting in the backyard.’ (24ckh019)

Note that in the above example the [i] of the final syllable [kái] appears to be deleted in the base, thus producing the reduplicative structure [o-sapukà~pukái]. This deletion of the final glide of a CVi syllable in the final position of the base of reduplication seems to be partly optional and partly lexically specified in Guaraní. Thus, while purahéi [purahéi] ‘sing’ and mokôi [môkõí] ‘two’ can only be reduplicated with their final [i] preserved in the base (*[purahè~rahéi], *[mõkô~mõkõî]), sapukái [sapukái] ‘shout’, jahéi [dôhèi] ‘offend’, kachiãi [kãʃĩãĩ] ‘funny’ and jokuái [dôkúái] ‘hire’ can reduplicate with or without their final [i] in the base. However, it must be noted here that the variation observed in these examples is mostly based on data elicited from only one consultant and therefore should be interpreted with caution.

(23) a. Umi mitã’ikuéra ojahéi jahéi hapicháre.
ũmì mitã-ʔi-ʔʷéra o-dâhèi~dâhëí h-apiʃà=re
those child-DIM-PL A3-insult~REDUP H-fellow=at

b. Umi mitã’ikuéra ojahe jahéi hapicháre.
ũmì mitã-ʔi-ʔʷéra o-dâhè~dâhëí h-apiʃà-re
‘Each of the children made fun of their fellow.’ (Aug. 30, 2013)
(24) a. Ajokuái jokuái jepi che ra’ýpe ojogua hağua so’o.
   a-ʤokʷài~ʤokʷái ʤepí je-raʔi=pe o-ʤoyʷá hâŋʷâ
   A1SG-employ~REDUP repeatedly B1SG-son=to A3-buy in.order.to
   soʔô
   meat
   b. Ajokua jokuái jepi che ra’ýpe ojogua hağua so’o.
   a-ʤokʷâ~ʤokʷái ʤepí je raʔi=pe o-ʤoyʷá hâŋʷâ soʔô
   ‘I sometimes ask my son to buy meat.’ (Aug. 30, 2013)

There are also some forms (e.g., [hîʔái] ‘sweat’, [ʤeʔói] ‘go away’) which only appear without
the final [i] in the base when they are reduplicated.

(25) Umi hugadorkuéra hy’á hy’aipa.
   ŭmí  huyador-kʷéra  h-iʔa~hîʔai-pá
   those  player-PL  H-sweat~REDUP-TOT
   ‘Each of the players is sweating profusely.’ (Aug. 27, 2013)

(26) Mbo’eharuéra oje’o je’óîma.
   mboʔehar-kʷéra  o-ʤeʔò~ʤeʔói-mâ
   teacher-PL  A3-leave~REDUP-PRF
   ‘The teachers left one after another.’ (Aug. 27, 2013)

This pattern of [i] deletion seems to occur only in roots with two or more syllables; thus, [o-kái]
[A3-burn] ‘they are burning’ is reduplicated as [o-kâ~okái] (*[o-kâ~okái]) (more on the
reduplication of monosyllabic roots in Section 3.3). It should be noted here that final-glide
deletion, whether optional or obligatory, is specific to reduplication and does not occur in
unreduplicated forms. Since my data does not include any disyllabic or longer roots with a final
glide other than [i], I will refrain from making any claims as to whether or not this deletion
pattern is also applicable to other vocalic sounds of Guaraní.

The final [i] deletion in the base of the reduplicative forms of Paraguayan Guaraní is
reminiscent of the coda consonant deletion in the final syllable of the base of reduplication in
some other Tupí-Guaraní languages, as demonstrated by the following examples.
(27) Tupinamba (Tupián, Brazil)
  a. a-i-mokón
     1SG-3-swallow
     ‘I swallowed it.’ (Jensen, 1990, p. 128)
  b. a-i-mokó–mokón
     ‘I swallow(ed) them frequently.’ (Jensen, 1990, p. 129)

(28) Kamaiura (Tupián, Brazil)
  a. pyhyk
     ‘take, hold’
  b. pyhy–pyhyk
     ‘take several times’ (Seki, 2000, as cited in Rose, 2005, p. 358)

(29) Emerillon (Tupí-Guaraní, French Guiana)
  a. o-ʔal
     3-fall
     ‘He falls.’
  b. [oʔa]oʔal    (Rose, 2005, p.358 )

At this point, one might be tempted to form a generalization about the partial pattern of verb reduplication in Guaraní like the following:

“The pattern of partial reduplication in Guaraní is disyllabic and copies the last two syllables of a verb, regardless of their morphological status.”

Although the disyllabic constraint on partial reduplication in Guaraní certainly holds true, the above generalization turns out to be not quite airtight. Consider the following examples.

(30) a. Heindy hasēvy.
     hēǝndē        h-āsē-vi
     3.sister      H-cry-MIT
     ‘His sister was sniffling.’ (38fkh092)

     b. Heindy hasē hasēvy. (38fkh093)
     hēǝndē        h-āsē–hāsē-vi
     3.sister H-cry–REDUP-MIT
c. *Heindy hasëvy sëvy. (38fkh094)
   hêîndî h-åś-å-vî-sëvî

   ‘His sister sniffled over and over again.’

(31) a. Pe mitâ hâîsë hâîsëma.
   pe mîtâ h-âî-së~hâîsë-mâ
   that child H-tooth-leave~REDUP-PRF

   b. *Pe mitâ hâîsëma sëma.
   pe mîtâ h-âî-së-mâ~sëma
   ‘The child is growing teeth already.’ (Aug. 30, 2013)

The ungrammaticality of (30c) and (31b) shows that copying the last two syllables of a stem does not always produce the right reduplicative form. In h-åsë~åsë-vy (30b) the reduplicant copies the root asë ‘cry’ plus the consonantal relational prefix h- to the exclusion of the mitigative suffix –vy. Note that this contrasts with the reduplication pattern of (16) in which the verb o-puka-vy[A3-laugh-MIT] is reduplicated as o-puka-vy~kavy. Similarly, in (31) the aspectual suffix –ma does not participate in reduplication, the disyllabicity constraint being satisfied by the relational prefix h- plus the elements (i.e., âî ‘tooth’, së ‘leave’) of the compound stem h-âî-së. Obviously, any viable theory of morphology must be able to account for this and similar phenomena in other languages.

3.3 Reduplication of monosyllabic roots

All of the examples of reduplication we have considered so far, whether total root or partial reduplication, have involved roots with either two or more syllables. However, there exist a number of root forms in Guaraní that consist of only a single syllabic unit. Some of these forms are given in Table 3.2 below.
The question that arises at this point is how the reduplication system of Guaraní handles such monosyllabic roots? This section is intended to answer this question. We mentioned in 3.2 on partial disyllabic reduplication that in cases where the required two syllables cannot be supplied for the reduplication operation by a single morpheme, it is the adjacent morphological constituent that provides the missing syllabic unit (e.g., the final syllable of a stem preceding a monosyllabic suffix as in o-puka-vy~kavy (16)). The same strategy of “borrowing” syllabic units from adjacent morphemes is used when reduplication applies to monosyllabic roots. Consider the following example of reduplication with the root he ‘delicious’.

(32) He-te~hete ko’ã pakova.
    delicious-very~REDUP these banana
    ‘Each of these bananas tastes really good.’ (38qkr037)

In (32) above, we observe that the monosyllabic root he is not long enough to satisfy the disyllabic requirement of prosody on reduplication. In order to meet this constraint, the reduplication operation provides the required syllabic unit by borrowing from the suffixal intensive morpheme –te, thus yielding the well-formed reduplicative structure he-te~hete. In the following Guaraní sentences with the verb roots pê ‘break’ and u ‘eat’, we can see the use of the same strategy of syllable-borrowing to satisfy the constraint on reduplicant size. In the case of these examples, however, the morpheme that supplies the missing syllabic unit is a prefix rather than a suffix.
(33) Ha’e o-mo-pē-mopē pe yvyra-rakā.
3SG A3-CAUS-break~REDUP that tree-branch
‘He broke the branch into pieces.’ (26ekh052)

(34) Umi avakachi o-je-’u-je’u-pa.
those pineapple A3-PASS-eat~REDUP-TOT
‘The pineapples were eaten up one after another.’ (38fkh057)

Examples (35) and (36) below demonstrate that agreement markers can also be called on to satisfy the disyllabicity requirement.

(35) A-po~apo.
A1SG-jump~REDUP
‘I jump repeatedly.’ (38gkr040)

(36) Ko’ā ryguasu rupi’a-kue i-ne~ine.
these chicken egg-former B3-stink~REDUP
‘Each of these rotten eggs stinks.’ (24ikh051)

In the above examples, we observe that the reduplication operation copies the roots po ‘jump’ and ne ‘stink’ as well as the agreement prefixes a- and i- to yield the reduplicative forms a-po~apo and i-ne~ine with disyllabic reduplicants (*a-po~po, *i-ne~ne). It is worth noting here that when the agreement marker preceding the monosyllabic root in the base of reduplication is longer than one syllable, the entire prefix is copied by the reduplicant, not just its final syllable.

This is illustrated by the examples in (37) and (38).

(37) a. Ore-ne~orene. (38qkr029)
B1PL.E-stink~REDUP

b. *Ore-ne~rene. (38qkr030)
‘Each one of us stinks.’

(38) Pene-ne~penene.
B2PL-stink~REDUP
‘Each one of you guys stinks.’ (38qkr031)
The base of the reduplicative forms in (37) and (38) consists of the monosyllabic \textit{ne} and a disyllabic agreement marker, \textit{ore-} in (37) and \textit{pende-} (realized as \textit{pene-} in a nasal harmony domain) in (38). Since the disyllabicity constraint on reduplication cannot be met by the undersized root alone, the reduplicant has to make up for the missing syllabic unit by borrowing from the closest morpheme within the base. However, borrowing just the final syllable of \textit{ore-} and \textit{pende-} would yield ungrammatical forms as demonstrated by \textit{*ore-ne~rene} (37b). The ungrammaticality of such forms indicates that there exists a morphological constraint in the grammar of Guaraní which is responsible for preserving the integrity of agreement prefixes. Therefore, the prosodic disyllabicity constraint needs to be defined non-templatically as follows: \textit{all reduplicants must be minimally disyllabic}. Hence, although the reduplicant in forms like \textit{ore-ne~orene} and \textit{pene-ne~penene} copies the entire affixal morpheme, it still complies with the disyllabicity requirement of prosody.

We saw in our overview of Guaraní inflectional morphology (Section 2.3) that negation can be expressed on verbs by means of the negative circumfix \textit{nd(a)~i} as demonstrated below.

\begin{itemize}
\item \textbf{(39)} Umi \, mitã  \, nd-o-hó-i  \, eskuéla=pe.
\textit{those \, child \, NEG-A3-go-NEG \, school=to}

\textit{‘The children don’t go to school.’} (Sept. 6, 2013)
\end{itemize}

Example (40) below shows that reduplicating the negative verb \textit{ndohói} results in not only copying \textit{ho} and its agreement prefix \textit{o-} but also the negative circumfix \textit{nd-~i}.

\begin{itemize}
\item \textbf{(40)} Umi \, mitã  \, nd-o-hó-i~ndohói  \, jepi  \, eskuéla=pe.\textsuperscript{41}
\textit{those \, child \, NEG-A3-go-NEG~REDUP \, repeatedly \, school=to}

\textit{‘From time to time, the children don’t go to school.’} (Sept. 6, 2013)
\end{itemize}

\textsuperscript{41} The reduplicated verb \textit{nd-o-hó-i~ndohói} [nd-o-hó-i~ndohói] in this sentence can also appear as [nd-o-hó~ndohói] without the final high vowel in the base; however, my consultant prefers to preserve the former version with [i] present in both copies.
Also, in (41) below, we observe that both the agreement marker $o$- and the optative prefix $t$- preceding it are copied by the reduplicant.

(41) E-re chupekuéra t-o-sê~tosê Paraguái=gui.
IMP.SG-say to.them OPT-A3-leave~REDUP Paraguay=from
‘Tell them to leave Paraguay separately.’ (Sept. 6, 2013)

With the agreement marker $o$- copied to meet the disyllabic constraint, what we expect to see in the above example is $^*t$-o-sê~osê, not t-o-sê~tosê. Obviously, this poses a challenge to our characterization of Guaraní iterative forms as total root reduplication. In fact, the range of counterexamples is not limited to forms like nd-o-hó-i~ndohói and t-osê~tosê; a similar case appears in the following example of reduplication with the relational prefix h- appearing in the reduplicant as part of the copied material.

(42) Peteĩ pyharevé-pe Maléna o-hendu h-asê~hasê-ha
one morning=to Malena A3-hear H-cry~REDUP-SUBORD
hína mbyju’i.
PROG swallow
‘One morning, Malena heard a swallow crying and crying.’ (T27.046)

In the example above, while $^*h$-asê~asê would be fully compatible with a total root reduplication pattern, h-asê~hasê does not seem to be a perfect fit. These seemingly recalcitrant examples actually provide empirical evidence for the presence of CV syllabic units in the prosodic structure of Guaraní. More specifically, the prosody of Guaraní requires the obstruents [h] and [t] in h-asê and t-o-sê to be syllabified with the following vowel ([a] and [o] respectively), thus forming a CV syllable which then becomes available to the reduplication operation as a single prosodic unit. A similar argument could be made to account for the copying of negative circumfix nd-...-i in nd-o-hó-i~ndohói (40). The pre-nasalized stop [nd] serves as the onset to the initial syllable of the base nd-o-hó-i and is therefore copied by the reduplicant as part of the syllable [ndo].
Given the presence of syllabic units in the prosody of Guaraní, it should not be surprising at all to see them play an active role in a process like reduplication which is normally heavily influenced by prosodic constraints. Perhaps the strongest piece of evidence for the role of prosody as a key determinant of the shape of reduplicative structures in Guaraní comes from the reduplication of some monosyllabic roots which can occur as the main verb of a clause without taking any affixal morpheme. This is demonstrated by example (43) below using the color term *hū* ‘black’.

(43) Ko ṭyhareve pe ára hū lénto hína.
this morning that sky black sort.of PROG
‘The sky is pretty dark this morning.’ (1b2kh016)

However, when reduplicated, the prosodic constraint of disyllabicity forces *hū* to take the agreement marker *i*- in (44b) below.

(44) a. Peru o-hecha heta mbarangaja hū-va.
Pedro A3-see a.lot.of cat black-REL
‘Pedro saw a lot of cats which were black.’ (Oct. 31, 2013)

b. Peru o-hecha heta mbarangaja i-hū–ihū-va.
Pedro A3-see a.lot.of cat B3-black~REDUP-REL
‘Pedro saw a lot of cats, each of which was black.’ (Sept. 6, 2013)

In a similar case, the Stative predicate *hái* ‘sour’ which can occur without an agreement marker as the main verb of a clause, necessarily takes the prefix *i*- when reduplicated.

(45) a. Hái ko arasa.
sour this guava
‘This guava is sour.’ (Aug. 30, 2013)

b. I-hái~ihái ko’a arasa.
B3-sour~REDUP these guava
c. *Hái hái ko’ã arasa.

‘Each of these guavas is sour.’ (Aug. 30, 2013)

We are faced with an interesting situation when a monosyllabic root has both a prefix and a suffix. Since it is only one of the affixal morphemes which can contribute its syllabic unit(s) to help meet the disyllabic requirement on reduplication, it is important to see if the linear position of an affix per se (i.e., prefix vs. suffix) plays a role in deciding whether or not it participates in the reduplication process. The following table shows affix copying decisions for verbs made up of a monosyllabic base and both prefixal and suffixal material. The forms given in this table are based on data elicited from only one consultant. Ungrammatical forms are marked with an asterisk (*); the question mark (?) shows the consultant’s uncertainty about the grammaticality of the form.
It should be clear from the examples in Table 3.3 above that in the presence of both a prefix and a suffix, there is an overall tendency for the reduplicant to copy the monosyllabic root plus the suffix. Given the suffixal status of reduplication in Guarani, this should not be surprising at all. However, as is evident from most of these examples, there are many cases where the choice between the prefix and the suffix seems to be a matter of free variation, the crucial requirement being the disyllabicity of the reduplicant. It is also worth noting here that there are some suffixes which do not participate in reduplication. We have already seen two examples of such suffixes in this section, the subordinating suffix -ha (42) and the relativizer -va (44b). Two other suffixes
which behave similarly with respect to reduplication include the future tense suffix \( -ta \) and the perfect aspect suffix \( -ma \), both of which are non-stressable.

\[(46)\] 
\( \text{a. Opo opóta ohóvo hikuái.} \)  
\( \text{o-pò~opó-ta o-hó-vo hikʷáí} \)  
\( \text{A3-jump~REDUP-FUT A3-go-SER 3PL} \)  

\( \text{b. *Opóta póta ohóvo hikuái.} \)  
\( \text{o-pò-ta~póta o-hó-vo hikʷáí} \)  

‘They will be jumping repeatedly.’ (Oct. 31, 2013)

\[(47)\] 
\( \text{a. Apo apóma.} \)  
\( \text{a-pò~apó-mã} \)  
\( \text{A3-jump~REDUP-PRF} \)  

\( \text{b. *Apóma póma.} \)  
\( \text{a-pò-mã~póma} \)  

‘I jumped repeatedly.’ (Oct. 31, 2013)

In the next section we will see that the same patterns of total and partial reduplication found in Guaraní predicates also apply to numerals.

### 3.4 Reduplicative numerals

Like other languages of Amazonia, Guaraní has a “restricted numeral system”, in which only the lowest four members of the set of natural numbers have corresponding native Guaraní words, with Spanish numerals being used for higher numbers. (See Comrie (2013) and Greenberg (1978) on the general properties of numeral systems across languages.) Even though neologisms for higher numbers do exist in Guaraní, their use is not very common in naturally-occurring speech. For this reason, we will only consider reduplication of the first four Guaraní
numerals in this thesis. Table 3.1 below shows these cardinal numerals as well as some of the neological expressions intended to represent higher numbers.

Table 3.4 Guaraní numerals and their English equivalents

<table>
<thead>
<tr>
<th>Guaraní</th>
<th>pêtêĩ</th>
<th>mokoĩ</th>
<th>mbohapĩ</th>
<th>irunõĩ</th>
<th>po</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>one</td>
<td>two</td>
<td>three</td>
<td>four</td>
<td>hand (five)</td>
</tr>
<tr>
<td>Guaraní</td>
<td>potêĩ</td>
<td>pokõĩ</td>
<td>poapĩ</td>
<td>porunõĩ</td>
<td>pa</td>
</tr>
<tr>
<td>English</td>
<td>six</td>
<td>seven</td>
<td>eight</td>
<td>nine</td>
<td>stop (ten)</td>
</tr>
</tbody>
</table>

Of the four numerals with which we are concerned, petêĩ ‘one’ normally occurs as a partially reduplicated form when used as a distributive numeral.

(48) Ha’eküera ombyasy chupe hasẽ haguére ha peteĩ teĩ oupa jevy.
     ha’ek′ëra ő-mbiasí jupé h-ásẽ-haũwé=re ha pêtêĩ-têĩ 3PL  A3-lament to.her H-cry-PAST.SUBORD=at and one~REDUP
     o-u-pá dževí
     A3-come-TOT again
     ‘They felt sorry for her because of her crying, and one by one they all came back.’
     (T27.045)

In order to satisfy the disyllabicity constraint on reduplicant size, the numeral mokoĩ ‘two’ can only appear as mokoĩ~mokoĩ (*mokoĩ~kõĩ).

(49) Mokõĩ mokõĩ karia’y omoĩ irundy avati vosa pe kanóape.
     mõkoĩ~mõkoĩ kariaʔi ő-mô-ĩ ñrûndî avati vosá pe kâñôã=pe two~REDUP young.man A3-CAUS-be four corn bag that boat=to
     ‘Pairs of men put four bags of corn on the boat.’ (Mar. 20, 2013)

The numerals corresponding to English “three” and “four” may appear as either total or partial reduplication, as demonstrated by the following examples. Note that in the partially reduplicated forms, the reduplicant copies only the last two syllables of the base (i.e., [hapĩ] in [mbohapĩ] ‘three’ and [rûndĩ] in [Irûndĩ] ‘four’).
(50) a. Mbohapy mbohapy ype o’yta hínã lagúnape.
   mbōhapi–mbōhapi ipé oʔítá hínã layúnā=pe
   three~REDUP duck a3-swim PROG pond=to

   b. Mbohapy hapy ype o’yta hínã lagúnape.
   mbōhapi–hapi ipé oʔítá hínã layúnā=pe

   ‘Sets of three ducks are swimming in the pond.’ (Mar. 20, 2013)

(51) a. Mokōi karia’y omo irundy irundy avati vosa pe kanóape.
   mōkōi kariaʔi ō-mō-ī īrūndi–īrūndi avatí vosā pe kānōā=pe
   two young.man A3-CAUS-be four~REDUP corn bag that boat=to

   b. Mokōi karia’y omo irundy rundy avati vosa pe kanóape.
   mōkōi kariaʔi ō-mō-ī īrūndi–īrūndi avatí vosā pe kānōā=pe

   ‘Two men put sets of four bags of corn on the boat.’ (Mar. 20, 2013)

When a numeral occurs with an affix, the affixal material is not copied by the
reduplicant. This is illustrated in (52) below with the distributive numeral *mbohapy~hapy and the
stressable diminutive suffix -mi.

(52) a. mbohapymi
   mbōhapi-mí
   three-DIM

   ‘just three’ (Sept. 6, 2013)

   b. Emeʾē chupekuéra mbohapy hapymi pakova.
   ē-mēʔē jũpekwéra mbōhapi–hapi-mí paková
   IMP.SG-give to.them three~REDUP-DIM banana

   ‘Give each of them just three bananas.’

In this respect, the diminutive suffix -mi behaves similarly to the non-stressable limitative
enclitic -nde ‘only’ which does not participate in reduplication either (*mbohapy=nde~pýnde).\(^42\)

\(^42\) The clitic –nde realizes as –nte in many dialects of Guaraní.
a. mbohapýnde
mbohapi=nde
three=only
‘only three’ (Sept. 6, 2013)

b. Eme’e chupekuéra la pakova mbohapýnde.
ẽ-mêʔê jupek*éra la paková mbohapi–hapí=nde
IMP.SG-give to.them DET banana three~REDUP=only

‘Give them bananas, only three apiece.’ (Sept. 6, 2013)

3.5 Summary

The description presented above of reduplication in Guaraní can be encapsulated in the form of the following generalizations.

(i) The reduplication operation in Guaraní is suffixal (e.g., [õ-ɲẽ-mõ-mându?à–ndu?á] [A3-REFL-CAUS-remember~REDUP], [o-puka–vi–kavi] [A3-laugh-MIT~REDUP]).

(ii) Primary stress falls on the final syllable of the reduplicant and the last syllable of the base takes secondary stress (e.g., [o-soɾó] [A3-tear], [o-sorò–sorò] ‘tear in different parts’).
   (This is assuming that the reduplicative complex is not followed by a stressable suffix.)

(iii) The reduplication operation copies entire CV syllabic units, not discrete segments (e.g., [h-asẽ̃̀~hasẽ̃́] [H-cry~REDUP], [t-o-sẽ̃̀~tosẽ̃́] [OPT-A3-leave~REDUP]).

(iv) There is a disyllabicity constraint on reduplicative forms in Guaraní which requires all reduplicants to be at least two syllables in length ([i-kâ~ikâ] [B3-dry~REDUP], *[i-kâ~kâ]).

(v) While stressless suffixes are not reduplicable, stressable suffixes may or may not be copied by the reduplication operation.

(vi) Nasality does not spread across the base-reduplicant juncture (e.g., [mându?à–ndu?á], *[mânu?à–ndu?á] ‘remember’). Having identified the reduplicant as a suffix in Guaraní,
this fits nicely into the pattern of nasal harmony in Guaraní suffixal morphemes in which nasality does not spread from a suffix regressively.

(vii) It is both prosodic and morphological determinants that are involved in deciding the form of Guaraní reduplicative structures. Thus, while *[^<\rẽ-nẽ~rẽnê] satisfies the prosodic requirement of disyllabicity on reduplicative forms in Guaraní, it does not occur in the language as a grammatical structure, being instead superseded by [ôrẽ-nẽ~ôrẽnê] [BiPL.e-stînk~REDUP] which meets both the constraint on disyllabic stress and copies the entire prefix ore- rather than just part of it.
4 Semantic functions

The focus of this chapter is to provide an account of the various meanings associated with verbal and numeral reduplication in Paraguayan Guaraní. We shall see over the course of the following descriptive report that reduplication is used in Guaraní to express a range of semantic notions, most of which are highly iconic. The iconicity of reduplicative forms is not peculiar to Paraguayan Guaraní; rather, as reported by Rose (2005), it is a characteristic of reduplication in Tupí-Guaraní languages in general. In her paper, Rose (2005) subsumes the semantic functions of reduplication in the Tupí-Guaraní language family under two broad categories: “event-internal” and “event-external” repetition. Event-internal repetition refers to multiple occurrences of a situation conceived of as a single event confined to a single occasion (1, 2). Event-external repetition, on the other hand, concerns those situations which occur repeatedly on a number of separate occasions or in different locations (3, 4).

(1) Tupinamba (Tupian, Brazil)
   a. oro- pór
      1EX-jump
      ‘We jumped.’
   b. oro-pó-pór
      ‘We jumped, one after the other.’ (Jensen, 1990, p. 129)

(2) Emerillon (Tupí-Guaraní, French Guiana)
    āduʤa  wila  o-[su]suʔu
    rat  wood  3-RED-bite
    ‘The rat gnawed the wood.’ (Rose, 2005, p. 354)

(3) Tupinamba
   a. a-i- mokón
      1sg-3-swallow
      ‘I swallowed it.’ (Jensen, 1990, p. 128)
b. a-i-mokó-mokón
   ‘I swallowed them frequently.’ (Jensen, 1990, p. 129)

(4) Emerillon
   [õhe]õ-hem-ne    o-ʔa
   RED-3-go.out-CONTRAST 3-fall
   ‘He goes out again and falls down.’ (Rose, 2005, p. 353)

Although some of the reduplicative data from Paraguayan Guaraní can be analyzed in terms of Rose’s dichotomy between event-internal and event-external repetition, I will use the more familiar and more descriptively-oriented terms iterativity, continuity, distributivity, etc., which will also allow us to tease out the various semantic functions of Guaraní reduplicated forms with greater detail. It should be noted here that the expression of these notions is determined by the inherent semantic properties of the input to the reduplication operation, and by the context in which a given reduplicative form occurs; the formal distinction between total root reduplication and partial reduplication is not a determinant of distinctions in meaning in Paraguayan Guaraní. Unless stated otherwise, the terminology used in this chapter is to be understood as laid out in Comrie (1976) and Lyons (1977).

4.1 Iterativity

One of the semantic functions of reduplication in Guaraní is to express iterative situations. By iterativity, we mean that the situation denoted by the verb occurs repeatedly (or frequently) at different times (Kouwenberg & LaCharité, 2001, Lyons, 1977). The notion of iterativity can be expressed in Guaraní by reduplicated forms of Dynamic predicates, sometimes accompanied by the adverbial form *jepí* ‘repeatedly’.
(5) Che-ru che-mbo-kyhyje~kyhyje jepi a-së-ta.
   B1SG-father B1SG-CAUS-scared~REDUP regularly A1SG-leave-FUT
   javre pyharekue.
during at night
   ‘My father repeatedly makes me afraid of going out at night.’ (26lkh017)

(6) Ai-kotevẽ~tevẽ-ta y.
   A1SG-need~REDUP-FUT water
   ‘I will need water regularly.’ (26lkh041)

Example (5) above contains the reduplicated form of a verb denoting an achievement. The utterer of the sentence in (5) is referring to his/her father’s frequent warnings when he/she wants to go out at night-time; thus, reduplication in the context of this example indicates the utterer’s father’s repeated act of creating fear in his child. In (6), on the other hand, the verb kotevẽ ‘need’ denotes a state, with reduplication expressing the recurrent realization of the state on multiple occasions. In other words, the necessity for having access to water, occurs not only on a single occasion but frequently, for example, to make cement during the construction of a building.

More examples of iterative situations expressed by reduplicative verbs are given in (7-9) below.

(7) Pe mbarakaja o-kuaru~kuaru tupa-guy=pe.
   that cat A3-urinate~REDUP bed-under=to
   ‘The cat urinated under the bed several times.’ (Sept. 6, 2013)

(8) Ore ro-mbo-kua~mbokua la yvy.
   1PL.E A1PL.E-CAUS-hole~REDUP DET soil
   ‘We shovel the soil from time to time.’ (27jkh048)

(9) Peru o-monda~monda kuri petë lóga=pe.
   Pedro A3-rob~REDUP PAST one house=to
   ‘Pedro robbed a house several times.’ (27jkh054)

The reduplicated form o-kuaru~kuaru in (7) refers to the cat’s activity of urinating under the bed on a number of separate occasions. Similarly, in (8), the activity of shoveling the soil occurs frequently, and in (9) Pedro robs a house, not once, but several times. For Rose (2005), the
iterative situations expressed by the reduplicated forms of (5-9) represent “event-external repetition”.

4.2 Continuity

Another semantic function of reduplication in Guaraní is to express continuous or ongoing processes, as demonstrated by the reduplicative forms of the verbs in the following sentences.

(10) Che a-guata~guata.
    1SG A1SG-walk~REDUP
    ‘I kept walking.’ (24ckh001)

(11) Ha’e o-purahéi~rahéi.
    3SG A3-sing~REDUP
    ‘He kept singing.’ (24ckh004)

The reduplicated form of the process-denoting verbs _guata_ ‘walk’ and _purahéi_ ‘sing’ in (10) and (11) above express that the agent continues performing the activity denoted by the verb for an unspecified period of time. In the following example, we shall see that this continuous interpretation is also available for the inchoative verb _jeka_ ‘crack’ when reduplicated.

(12) Pe kanóa o-jeka~jeka hína.
    that boat A3-crack~REDUP PROG
    ‘The boat is cracking.’ (Mar. 11, 2013)

The sentence in (12) above describes a situation where a crack appears in one part of the boat and starts spreading to the adjacent parts while maintaining its integrity as a single crack.43

The aspectual category of continuity can also be expressed in Guaraní by means of the Dynamic verb _ho_ ‘go’ in a serial verb construction as demonstrated below.

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43 This sentence also has an alternative reading in which the reduplicative form _jeka~jeka_ is interpreted as referring to the emergence of separate cracks in different parts of the boat. We can subsume this interpretation under the category of dispersivity discussed in Section 4.6.
(13) Pe mitã-mi h-asê o-hó-vo.
that child-DIM H-cry A3-go-SER
‘The baby keeps crying.’ (23qkh010)

4.3 Multiplicity

While for some speakers reduplicated forms of verbs referring to such durative situations
as singing, walking, dancing, etc. indicate continuity, for others, they are associated with a
multiplicative reading; the situation occurs intermittently, or in Gil’s (1988) terms “in stages”.

(14) Che a-guata~guata a-há-vo hína.
1SG A1SG-walk~REDUP A1SG-go-SER PROG
‘I am walking intermittently.’ (23lkh001)

(15) Ha’e o-purahéi~purahéi o-hó-vo hína.
3SG A3-sing~REDUP A3-go-SER PROG
‘He is singing intermittently.’ (23lkh004)

(16) Pe pyhare entéro o-ky~oky kuri.
that night entire A3-rain~REDUP PAST
‘It kept raining on and off all night.’ (24ikh062)

Similarly, reduplicated forms of verbs of perception such as hecha ‘see’, hendu ‘hear’,
and ñandu ‘feel’ can also be associated with a multiplicative interpretation.

(17) Ha’ekuéra o-hecha~hecha kuri pe várko amo mombyry.
3PL A3-see~REDUP PAST that ship there far
‘They could see the ship at intervals far away in the distance.’ (28akh062)

(18) A-hendu~hendu kuri umi aguaraguasu-kuéra.
A1SG-hear~REDUP PAST those fox-PL
‘I could hear the foxes howl at intervals.’ (28akh067)

(19) Kálo o-ñandu~ñandu la tata haku.
Carlos A3-feel~REDUP DET fire heat
‘Carlos could feel the heat of the fire at intervals.’ (28akh071)
With verbs referring to punctual situations, a multiplicative interpretation indicates that the situation occurs repeatedly at the same time and involves the same actants (Kouwenberg & LaCharité, 2001).

(20) Pe karai tuja oi-kutu-kutu pe kure.
that man old A3-stab~REDUP that pig
‘The old man stabbed the pig several times.’ (26ikh008)

(21) Peru o-mbo-popo~popo pe vakapipopo tápia=re.
Pedro A3-CAUS-jump~REDUP that ball wall=at
‘Pedro bounced the ball against the wall several times.’ (27jkh081)

The sentence in the following example describes a situation in which a sinking ship is bobbing up and down in the water.

(22) Pe várko o-ñapymi~pymi.
that ship A3-plunge~REDUP
‘The ship is bobbing up and down.’ (24ikh014)

4.4 Distributivity

Yet another function of reduplication in Paraguayan Guaraní concerns the notion of distributivity: repeated occurrence of a situation, either successively or simultaneously, involving different participants (see Kouwenberg & LaCharité, 2001). As we shall see below, the notion of distributivity in Guaraní can be expressed by both reduplicated verbs and reduplicative numerals. In 4.4.1, we will look at distributivity as a semantic function of verb reduplication. Section 4.4.2 demonstrates how Guaraní uses reduplication to form distributive numerals.44

4.4.1 Distributive verbs

Reduplicated Dynamic predicates can express the distribution of the situation they denote over any of their arguments, as long as the relevant argument is plural. With transitive verbs, this

44 The terms “distributive numerals” and “distributive verbs” used in this thesis have been taken from Gil (1988).
can be either the A or the O argument and, of course, with intransitives the only choice is the S argument.

(23) Umi guyra-kuéra o-veve–veve hína.
    those bird-PL A3-fly–REDUP PROG
    ‘Each of the birds is flying.’ (28akh052)

(24) Umi mitã-kuéra o-vy’a–vy’a o-’yta jave.
    those child-PL A3-enjoy–REDUP A3-swim during
    ‘Each of the children enjoys swimming.’ (26lkh023)

(25) Umi mitã-karia’y o-jahoga–hoga hína pe ysyry=pe.
    those child-young.man A3-drown–REDUP PROG that river=to
    ‘Each of the boys is drowning in the river.’ (24dkh028)

We observe in (23-25) above that the situation denoted by the verb distributes over its sole argument, regardless of its thematic role in the sentence. Thus, in (23) the activity of flying is associated with each bird; (24) describes a situation where each child experiences the state of joy; and the event of drowning affects each of the boys in (25).

The same distributive pattern occurs in examples (26) and (27) below which contain reduplicative forms of transitive verbs.

(26) Ha’ekuéra o-po’i–po’i ita-’i y-ryepý=pe.
    3PL A3-drop–REDUP stone-DIM water-inside=to
    ‘They each dropped a pebble into the water.’ (26lkh082)

(27) Ha’ekuéra oi-nupã–nupã umi kuré=pe.
    3PL A3-hit–REDUP those pig=to
    ‘They each hit the pigs.’ (Aug. 27, 2013)

In the case of the above examples, the reduplicative event-denoting verbs o-po’i–po’i ‘drop’ and oi-nupã–nupã ‘hit’ distribute over their A argument. However, as mentioned above, it is possible for transitive distributive verbs to operate on their O argument as well. This is illustrated by the following examples.
(28) Che a-joka–joka umi hárro.
   1SG A1SG-break-REDUP those cup
   ‘I broke each of the cups.’ (26ekh132)

(29) Ha’ekuéra o-pinta–pinta umi apyka-kuéra.
   3PL A3-paint-REDUP those chair-PL
   ‘They painted each of the chairs.’ (Aug. 27, 2013)

Even though the verbs *joka* ‘break’ (28) and *pinta* ‘paint’ (29) denote different types of situations (with *joka* referring to a punctual situation and *pinta* denoting a durative one), they both can still enter into a distributive relation with their O argument. Note also that while the A argument in (28) is interpreted as singular, (29) has an A argument which refers to a plurality of participants. Thus, the sentence in (28) refers to a situation where the agent acts on a number of cups breaking one after another, (29) describes a situation in which each chair in a set of chairs is painted by one or more members of a group of active participants on the same occasion.

An analysis within the framework adopted by Rose (2005) would subsume examples (23-29), excluding (24), under event-internal repetition. It must be noted here that transitive distributive verbs do not operate on both of their arguments simultaneously. Thus, the sentence in (27) cannot be interpreted as “they each hit every pig”.

As opposed to reduplicative dynamic predicates which can have a wide range of interpretations, the only possible reading associated with reduplicated stative predicates is, at least in the majority of cases, that of distributivity. A few examples are given below.

(30) Ha’ekuéra i-karape–karape.
    3PL B3-short-REDUP
    ‘Each of them is short.’ (24ckh006)

(31) Umi óga i-tuja–tuja.
    those house B3-old-REDUP
    ‘Each of the houses is old.’ (24ckh025)
Observe in the following example that the co-occurrence of the reduplicative Stative predicate *i-piru~piru* ‘skinny’ with the Dynamic verb *o-ho* ‘go’ in a serial verb construction yields a compositional meaning of distributivity and ongoing process.

(33) Che-angiru-kuéra  i-piru~piru   o-hó-vo.
    B1SG-friend-PL  B3-skinny~REDUP  A3-go-SER
    ‘Each one of my friends is getting skinny.’ (24ckh021)

Examples (34) and (35) below demonstrate that denominal verbs of possession (formed by affixing a Set B marker to a noun) are generally unreduplicable.

(34) a. Ñande ñane-mimby.
    1PL.I  A1PL.I-flute
    ‘We have flutes.’ (38fkh002)

    b. *Ñande  ñane-mimby~mimby.
       1PL.I  A1PL.I-flute~REDUP
       (Intended meaning: We each have a flute.) (38fkh004)

(35) a. Ha’ekuéra  i-po.
    3PL   B3-hand
    ‘They have hands.’ (38fkh008)

    b. *Ha’ekuéra  i-po~ipo.
       3PL   B3-hand~REDUP
       (Intended meaning: They each have hands.) (38fkh009)

**4.4.2 Distributive numerals**

As mentioned in Section 3.4, the numeral system of Guarani is restricted to the lowest four members of the set of natural numbers (i.e., 1-4) and the expression of higher numbers is accomplished by means of Spanish numerals. As part of an effort to “purify” the language, a set of neologisms have been devised to replace the Spanish numerals; however, their use is not
common in colloquial Guaraní. The four cardinal numerals of Guaraní along with some of the
neologisms for higher numbers are given in Table 4.1 below (repeated from Section 3.4).

Table 4.1 Guaraní numerals and their English equivalents

<table>
<thead>
<tr>
<th>Guaraní</th>
<th>pẽtẽĩ</th>
<th>mokoĩ</th>
<th>mbohapĩ</th>
<th>irundĩ</th>
<th>po</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>one</td>
<td>two</td>
<td>three</td>
<td>four</td>
<td>hand (five)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Guaraní</th>
<th>poteĩ</th>
<th>pokoi</th>
<th>poapi</th>
<th>porundi</th>
<th>pa</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>six</td>
<td>seven</td>
<td>eight</td>
<td>nine</td>
<td>stop (ten)</td>
</tr>
</tbody>
</table>

(36) Mokõi ajaká=pe o-ĩ hína po pakova.
\[\text{two basket=to A3-be PROG five banana}\\
\text{‘There are five bananas in two baskets.’ (Mar. 11, 2013)}\]

(37) Mbohapy ype o-ỹta hína lagúna=pe.\[45\]
\[\text{three duck A3-swim PROG pond=to}\\
\text{‘Three ducks are swimming in the pond.’ (Mar. 11, 2013)}\]

In order to form distributive numerals, cardinal numerals are reduplicated, as shown by
the following examples. It is worth noting here that the examples given in this section with
distributive numerals do not represent commonly occurring utterances of Guaraní in everyday
speech.

\[\text{45 Observe the structural ambiguity in the following sentence resulting from the co-occurrence of the numeral }\]

\[\text{mbohapy ‘three’ and the set-denoting term aty.}\\
\text{Mbohapy ype aty o-ỹta hína lagúna=pe.}\\
\text{three duck set A3-swim PROG pond=to}\\
a. ‘Three sets of ducks are swimming in the pond.’\\
b. ‘A set of three ducks is swimming in the pond.’ (Mar. 20)\]
(38) Mbohapy~hapy ype o-'yta hina lagúna=pe.
   three~REDUP duck A3-swim PROG pond=to
a. ‘Sets of three ducks are swimming in the pond.’
b. ‘Ducks are swimming in the pond, three at a time.’ (Mar. 20, 2013)

The Guaraní sentence in the above example can have two interpretations. In one reading, a
number of ducks are swimming in a pond simultaneously in sets of three. In an alternative
interpretation, this sentence describes a situation where there is a set of three ducks swimming in
a pond at each separate interval. Both of these interpretations presuppose that there are at least
two sets of ducks involved in the situation.

In the example given in (39) below, the utterer of the sentence is asking the addressee to
distribute some bananas among a number of people such that each member of the group receives
just one banana.

(39) E-meʾɛ chupekuéra peteĩ-teĩ-mi pakova.
   IMP.SG-give to.them one~REDUP-DIM banana
   ‘Give them just one banana apiece.’ (Sept. 6, 2013)

The situation described by the following example is one in which two workers walk back and
forth from a pier to a boat, each time loading four bags of corn on the boat.

(40) Mokõi karia’y o-moĩ irundy~rundy avati vosa pe
   two young.man A3-CAUS-be four~REDUP corn bag that
   kanóa=pe.
   boat=to
   ‘Two men load bags of corn on the boat, four at a time.’ (Mar. 20, 2013)

Now consider the following example describing a situation in which four bags of corn were
loaded on a boat, each one by a different pair of workers.
(41) Mokõi~mokõi karia’y o-mo-ĩ irundy avati vosa pe
two~REDUP young.man A3-CAUS-be four corn bag that
kanôa=pe.
boat=to
‘Four bags of corn were loaded on the boat by two men each.’ (Mar. 20, 2013)

Finally, in (42), pairs of workers are loading sets of four bags of corn on a boat, with each pair of men loading one set of bags.

(42) Mokõi~mokõi karia’y o-mo-ĩ ohóvo irundy~rundy avati
two~REUDP young.man A3-CAUS-be A3-go-SER four~REDUP corn
vosa pe kanôa=pe.
bag that boat=to
‘Pairs of men are loading sets of four bags of corn on the boat.’ (Mar. 20, 2013)

Adopting Gil’s (1988) line of analysis, in what would be admittedly a short diversion from our descriptive route, we can account for the various relations of distributivity observed in the above examples as follows. For the first interpretation of (38), one could posit a relation of distributivity between the distributive numeral mbohapy~hapy [three~REDUP] and the noun it precedes (i.e., ype ‘duck’) where the distributive numeral distributes over the noun it quantifies. Thus, what we are faced with in this example is, in Gil’s terms, a relation of “phrase-internal distributivity”. We can actually see in (42) two relations of phrase-internal distributivity holding simultaneously in a single clause; that is, the distributive numeral in each of the arguments of the transitive verb moĩ ‘put’ distributes over the noun it quantifies. In examples (39-41) as well as in interpretation (b) of (38), however, the distributive relation holds at a clausal level, rather than at a phrasal one. Thus, in (39) the distributive numeral pëtëĩ~teĩ [one~REDUP] forces the quantified noun pakova ‘banana’ to distribute over the R argument (i.e., chupekuéra [to.them]) of the verb me’ê ‘give’. The sentence given in (40) can be analyzed in terms of the distribution of the NP
containing the distributive numeral *irundy~rundy* [four~REDUP] which functions as the O argument of the clause over what Gil (1988) refers to as a “covert constituent” semantically associated with the verb, denoting events. Hence, in this example each event of putting is associated with a set of four bags. Similarly, interpretation (b) of (38) results from the distribution of the noun phrase *mbohapy~hapy ype* [three~REDUP duck] over such a covert semantic constituent. Thus, in (38b) each event of swimming is associated with a set of three ducks. The clausal distributivity in (41) differs from the one in (38b) and (40) in that in the former the distributive relation holds between the two core arguments of the verb, rather than between the verb and one of its arguments. In this sentence the noun phrase containing the distributive numeral *mokõi~mokõi* [two~REDUP] which serves as the A argument of the verb *moĩ* ‘put’ distributes over the verb’s O argument, yielding a reading in which each of the four bags is associated with two men. This analysis of distributivity is formalized by Gil (1988, p. 1046) as follows: “Reduplication of an expression A forces an expression B containing A to distribute over a constituent C disjoint from B.”

Based on our discussion of the distributive function of Guaraní verb and numeral reduplication, we can observe that reduplicative verbs and numerals in this language when used as distributive quantifiers can operate on the S argument of intransitive Stative and Dynamic predicates as well as the A and O arguments of transitive verbs. In addition, as demonstrated by example (39), it is possible for a noun phrase containing a distributive numeral to operate on the R argument of a ditransitive verb like *meẽ* ‘give’. This is in contrast to the range of arguments which can be quantified by the totalitive verb suffix -*pa*. As demonstrated by the examples in Section 2.3.1.7, this suffix can only quantify the S argument of Stative and Dynamic intransitive predicates and the O argument of transitive verbs.
4.5 Intensity

Reduplication is sometimes used in Guaraní to express that the action denoted by the verb is performed with increased force, often violently. The following examples are illustrative.

(43) Móncho oî-nupâ~nupâ la kurê=pe.
   Ramon A3-hit~REDUP DET pig=to
   ‘Ramon beat the pig frantically.’ (Aug. 30, 2013)

(44) Kalîsto che-myaña~myaña ro-huga-há=pe partido.
    Kalîsto B1SG-push~REDUP A1PL.E-play-SUBORD=TO game
    ‘Kalîsto pushed me roughly during the game several times.’ (28akh050)

4.6 Dispersivity

The last function of reduplication associated with iconicity in Paraguayan Guaraní we mention here is that of dispersivity: only discontiguous parts of the patient are affected by the situation denoted by the verb.

(45) Ha’ekuéra o-pint a~pinta pe apyka.
    A3-paint~REDUP that chair
    ‘They left paint spots here and there on the chair.’ (Aug. 27, 2013)

(46) Ha’ekuéra o-mbo-gue~mbogue kuri pe ta’anga pe tápia=gui.
    A3-CAUS-go.away~REDUP PAST that picture that wall=from
    ‘They erased parts of the picture from the wall.’ (27jkh006)

4.7 Carelessness

The only non-iconic meaning associated with reduplication I have encountered in Guarani is that of haste/carelessness. In the following examples, the act or activity denoted by the verb is performed hurriedly or with little or no attention/interest on the part of the agent.
4.8 Summary

In this chapter, we saw that reduplication in Paraguayan Guaraní is associated with a range of semantic notions including iterativity, continuity, multiplicity and distributivity. It is possible to present a unified account of these various semantic functions of Guaraní reduplicative forms by characterizing Guaraní as a language which uses the morphological device of reduplication to mark pluractionality (or event plurality) (see Lasersohn (1995) for such an approach to the analysis of verbal plurality). The iconicity of Guaraní reduplication aligns it with other Tupí-Guaraní languages, in which reduplicative structures are normally associated with iconic meanings. Thus, such semantic notions as iterativity, distributivity, continuity, dispersivity, etc. have been reported as some of the functions of reduplication in Tupinamba, Emerillon, Guarayo and some of the other Tupí-Guaraní languages (see Rose (2005) and references therein). Of course, the expression of iconic concepts by reduplication is not restricted to any one language family, and as Moravcsik (1978, p. 317) points out, the concept of “increased quantity”, which encompasses such iconic notions as repetition, continuity, distributivity, intensity, etc., is “the most outstanding single concept that reduplicative constructions recurrently express in various languages.” Given this universal tendency, perhaps it should not be surprising to see a language which is as distant from Guaraní as Georgian employs...
the morphological operation of reduplication as a strategy for expressing multiplicity and distributivity in almost the same way that Guaraní does.

(49) Georgian (Kartvelian, Georgia)

a. Man vašlebi mic’-mic’ia.
   3sg-erg apples-abs moved-clausal:dist-3sg
   ‘He moved each of the apples separately.’ (Gil, 1988, p. 1052)

b. Man vašlebi mic’i-mic’ia.
   3sg-erg apples-abs moved-phrasal:dist-3sg
   ‘He moved the apples in stages.’ (Gil, 1988, p. 1052)

c. Or-orma ka’cma sam-sami čanta c’aiyo.
   two-distr-erg man-erg three-distr-abs suitcase-abs carried-3sg
   ‘Sets of two men carried sets of three suitcases.’ (Gil, 1988, p. 1047)
5 Concluding remarks

The findings of this study characterize Guarani as a language with both full and partial reduplication. In the former pattern, a copy of the entire root is attached to the base (e.g., [ʃẽ-mbo-kihidʒe–kihidʒe] [B1SG-CAUS-scared-REDUP] ‘scare repeatedly’), whereas partial reduplication typically (though not always) involves creating a suffixal copy of the last two syllables of the base (e.g., [o-puka-viː-kavi] [A3-laugh-MIT-REDUP] ‘smile repeatedly’). A special case involves reduplication of monosyllabic roots, where the root plus its adjacent affixal morpheme is copied by the reduplicant (e.g., [a-pó] [A1SG-jump], ‘I jump’, [a-póː-apó] ‘I jump repeatedly’). This is due to the presence of a prosodic constraint on Guarani reduplicative forms which requires all reduplicants to be minimally disyllabic.

In terms of its semantic function, reduplication is used in Guarani mainly as the expression of such meaning categories as iterativity, continuity, multiplicity and distributivity, which are all iconic. Providing a unified analysis of these semantic functions of Guarani reduplicative forms in terms of the concept of pluractionality will be the subject of future research. The iconicity of reduplication in Guarani aligns it with other Tupi-Guarani languages, in which the relation between reduplicative forms and their meanings is also highly iconic (Rose, 2005). On a larger cross-linguistic scale, the iconic nature of reduplication in Guarani provides further support for the iconicity of reduplication as a language universal (Haiman, 1980; Lakoff & Johnson, 2003; Moravcsik, 1978). It must be stressed here that reduplication in Guarani does not generally apply to verbs of possession derived from nouns (e.g., ěane-mimby [B1PL.1-flute] ‘we (incl) have flutes’). This distinction between typical (Stative and Dynamic) verbs and denominal verbs of possession regarding their reduplicability provides evidence in favor of positing a distinction between verbs and nouns as two separate lexical categories in Guarani.
Although the meaning properties of reduplication in Guaraní conform to existing accounts of the semantic functions of reduplicative forms across languages, there are aspects of its form properties which do not fit the well attested cross-linguistic patterns, posing some challenges for the notion of foot in metrical phonology (Hayes, 1995). Perhaps the most striking characteristic of reduplication in Guaraní is what we referred to in Chapter 3 as [i] deletion in the base of reduplication. Consider the following examples (repeated from Chapter 3).

(1) Peru osapuka pukái korapýpe.
perú o-sapukà~pukái korapi=pe
Pedro A3-shout~REDUP backyard=to
‘Pedro kept shouting in the backyard.’ (24ckh019)

(2) Umi mitã́ikuéra ojahe jahéi hapicháre.
ũmí mítã-ʔi-kʰéra o-dʒahè~dʒahéi h-apiʃá=re
those child-DIM-PL A3-insult–REDUP H-fellow=AT
‘Each of the children made fun of their fellow.’ (Aug. 30, 2013)

Using reduplication as a diagnostic tool, we demonstrated in Chapter 3 that the Ví sequence in words like [o-sapukái] and [o-dʒahéi] is tautosyllabic, with the high vowel at the right periphery of the word acting as a glide. As Hayes (1995) points out, some languages employ vowel gliding or deletion as a strategy to resolve hiatus, with the relevant mechanism being syllable merger. Under Gregores and Suarez’s (1967) account of syllable structure in Guaraní, in which each vowel in a word underlyingly (or, in Gregores and Suarez’s terms, phonologically) represents a syllable, it would be possible to account for the occurrence of CVi syllables (with [i] standing for any high vowel of Guaraní) in the language as instances of hiatus resolution via syllable merger. This occurs at the surface level when there is no marker of syllable division (referred to by Gregores and Suarez (1967) as a “phoneme of juncture”) to mark the syllable boundary between
the underlying word-final onsetless syllable consisting only of a nuclear high vowel and its preceding stressed syllable.

Whatever the motivation for the occurrence of such syllables in Guaraní, we can attempt to account for final [i] deletion (to be taken in a purely descriptive sense) in the base of the reduplicated forms of verbs like [o-sapukái] and [o-dʒahéi] in a number of ways. One possible analysis would be to consider reduplication in Guaraní as infixal, rather than suffixal, where the reduplicant is inserted before the final glide of the base (if present). In cases where the base does not have a final glide (e.g., [o-ŋñ-mò-mânduʔá] ‘remember’, [i-píru] ‘skinny’), the reduplicant appears to be a suffix ([o-ŋñ-mò-mänduʔá-nduʔá], [i-píru-píru]). However, in cases where the base ends in a glide (e.g., [o-sapukái], [o-dʒahéi]), the infixal character of reduplication is revealed. This analysis, however, does not gain much support from the facts of the language. For one thing, there are reduplicative structures such as [o-púraheï~rahéi] ‘keep singing’ and [mòkòi~mòkòi] ‘in pairs’ in which the reduplicant is clearly suffixed to a base with a final glide. Even forms like [o-sapukái] and [o-dʒahéi] themselves can reduplicate as [o-sapukài~sapukái] and [o-dʒahèi~dʒahéi]. Furthermore, there does not seem to be any obvious process of infixation in Guaraní morphology at all. Hence, an analysis of reduplication as infixation in Guaraní would be a weak case, to say the least. Based on a second perhaps more straightforward analysis, the final glide [i] in [o-sapukái], [o-dʒahéi], etc., is deleted from the base post-reduplication. Even though this analysis describes the situation as it appears, it does not provide us with any insight into the factor(s) motivating it. Therefore, were we to adopt such an account, we would have to content ourselves with a vague explanation telling us that there is some phonological process in Guaraní which scans the base of reduplicative forms and if it finds a final glide, it optionally deletes that glide from the base. It is hard to imagine why any language would ever need to
incorporate such a bizarre process into its phonological system. Yet another analysis would be to suggest that the final glide in forms like [o-sapukái] and [o-dʒahéi] is optionally extrametrical and thus is invisible to the reduplication operation. However, given that the foot template in Guarani is iambic (see Section 2.2), the extrametricality of [i] in word-final CVi syllables would involve a violation of the Iambic/Trochaic Law proposed by Hayes (1995, pp. 80) based on his cross-linguistic study of metrical structure. In his monograph on metrical theory, Hayes (1995) proposes a triadic foot inventory consisting of the following foot types: the syllabic trochee, the moraic trochee and the iamb. Of these three foot templates, the syllabic trochee is disyllabic and left-dominant, the moraic trochee is bimoraic and again left-dominant, and the iambic foot is canonically disyllabic and right-dominant. The Iambic/Trochaic Law states that elements which are naturally grouped together based on a contrast in their relative intensity are initially-prominent, while those groupings which are perceived to have final prominence contain elements which are distinguished by their relative duration. Given the Iambic/Trochaic Law, we expect iambic feet, which are right-dominant, to have as their head a syllable with greater duration than their left element, i.e., a heavy syllable. In order to meet this requirement, languages with iambic feet typically have such processes as vowel lengthening or consonant gemination as part of their segmental phonology to avoid what Hayes (1995) refers to as “even iambs”, i.e., iambs with two light syllables. Putting this in perspective, it would be quite odd for Guarani to treat the final glide in word-final CVi syllables as extrametrical, thus rendering a heavy syllable which serves as the head of an iamb light. Clearly, this would be an active violation of the Iambic/Trochaic Law.

Another formal aspect of reduplication in Guarani which needs to be accounted for is the unreduplicability of a number of suffixes. As we saw in Chapter 3, some of these suffixal
morphemes are stressable (e.g., the subordinator -ha) and some are stressless (e.g., the future tense suffix -ta and the perfect aspect suffix -ma). While it might seem plausible to analyze stressless suffixes as extrametrical and thus invisible to reduplication, suggesting that there are also some extrametrical stress-attracting suffixes in Guaraní would be quite far-fetched. In addition, the fact that the stressless suffixal component of the negative circumfix nd-..-i can be copied by reduplication (e.g., [nd-o-hò-i~ndohói] [NEG-A3-go-NEG~REDUP]) goes against an extrametricality-based account. To make matters more complicated, there are also some stressable suffixes whose reduplicability seems to depend on the stem to which they attach. This is exemplified by the mitigative suffix -vy in (3) below (repeated from Chapter 3).

(3) María  opukavy kavy.  
    maría  o-puka-vi-kaví  
    Maria  A3-laugh-MIT~REDUP  
    ‘Maria smiles over and over.’ (38qkr020)

(4) a. Heindy hasē hasēvy. (38fkh093)  
    hēṇdī  h-āsē~hāsē-vī  
    3.sister  H-cry~REDUP-MIT

    b. *Heindy hasēvy sēvy. (38fkh094)  
    hēṇdī  h-āsē-vi~sēvi

    ‘His sister sniffled over and over again.’

Note also that positing a template of suffix slots cannot account for the reduplicability of some suffixes and the non-reduplicability of others either. Based on such an analysis, the reduplicable suffixes would be the ones that occur before such suffixes as -ta [future], -ma, [perfect aspect] and -ha [subordinator]. However, the fact that the negative -i (which is reduplicable) can occur to the right of -ha is problematic for such an analysis.
(5) Ai-mo’ã nda-i-tavy-há-i.

A1SG-thinkNEG-B3-crazy-SUBORD-NEG

‘I thought he wasn’t crazy.’ (27gkr093)

Also observe that -i follows the suffix -ve ‘more’ which behaves inconsistently with respect to reduplication, as demonstrated by (7) and (8).

(6) Nd-o-kyvé-i-ma.

NEG-A3-rain-more-NEG-PRF

‘It is not raining anymore.’ (1b7kr026)

In the following examples, while i-ne-ve [B3-stink-more] can be reduplicated either as i-ne~ine-ve or i-ne-ve-neve, i-ro-ve [B3-bitter-more] only reduplicates as i-ro~iro-ve (based on only one consultant’s judgments).

(7) a. Ha’ekuéra i-ne-ve-neve ndehegui. (38qkr086)

3PL B3-stink-more~REDUP from.you

b. Ha’ekuéra i-ne~ine-ve ndehegui. (38qkr087)

‘They each stink more than you.’

(8) a. Ko’ã pakova i-ro~iro-ve umíva=gui.

these banana B3-bitter~REDUP-more those.ones=from

b. *Ko’ã pakova i-ro~rove umíva=gui.

‘Each of these bananas is bitterer than those ones.’ (Aug. 30, 2013)

The last characteristic of Guaraní reduplicative forms we mention here which poses a challenge for templatic accounts of reduplication involves verbs consisting of a monosyllabic
root plus a disyllabic agreement marker (e.g., [õrẽ-nê] [B1PL.E-stink]) ‘We (EXCL) stink’). The
reduplicated form of such verbs consists of a copy of the entire verb, not just its last two
syllables ([õrẽ-nê–õrẽ-nê], *[õrẽ-nê–rẽnê]). If we were to define the target of reduplication in
Guarani solely as an iambic foot template, we would fail to capture reduplicated structures of this
kind.

The challenges we are faced with in analyzing Guarani reduplicative structures within a
purely phonological framework show that reduplication can be best characterized only when we
take into account both the prosodic and morphological constraints governing it.
References


