NULL SUBJECTS IN CREOLE LANGUAGES

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ABSTRACT

Analyses of null subject usage cross-linguistically have traditionally relied heavily on its correlation with a language's rich inflectional morphology, which has been argued to license and identify the dropped subject. Many creole languages present a problem for such analyses, given that they lack inflectional morphology, but are still able to instantiate a diverse variety of pro-drop symptoms. In this paper, I will examine a number of creoles' use of null subjects, showing that they manifest a range of null subject phenomena. I will then provide primary data of null subject usage in Cape Verdean Creole, a language which instantiates a remarkably wide range of pro-drop phenomena, including both null expletives and null argumental pronouns. Given this data, which directly contradicts the predictions made by the general theory, I will offer an analysis from within a Minimalist framework to account for its use of null subjects.

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CHAPTER 1: INTRODUCTION

Over the last several decades, null subject phenomena have undergone a wide range of interpretations and analyses; the vast majority of which rely on tying the presence of null subjects to the presence of rich inflectional morphology in the language at hand. The basic, albeit highly simplified, argument is that such inflectional morphology allows the dropped subject to be identified and recovered. Languages with rich morphological inflection, like Italian or Spanish, are thus correctly predicted by these analyses to allow the use of null subjects, while languages lacking rich inflection, like English or French, are correctly predicted to disallow null subject usage. Other languages, which show richer inflection than English but poorer inflection than Italian, such as German, would be predicted to allow some types of null subjects but not others (i.e. an expletive null subject language). We will see, however, that these issues are not nearly so straightforward, and that formulating an analysis with the ability to cover the entire range of null subject phenomena that has been observed cross-linguistically faces a great deal of challenges. Even attempting to simply define what constitutes the "rich" inflection to which these analyses refer is in itself a complicated endeavor. Nonetheless, the intuitive connection between rich inflectional agreement and the licensing and identification of *pro* is a common thread that ties together not only the arguments made in the foundational literature, but also many of the recent attempts to analyze and typologize null subject languages from a post-Government and Binding standpoint.

Following this line of reasoning, the general theory would thus predict that creole languages, given their characteristic dearth of inflectional morphology, would be unable to instantiate the pro-drop phenomena found in inflectionally rich languages. As I will show, however, this prediction is not borne out. A broad range of creole languages do, in fact, exhibit a diverse array of null subject phenomena.   In addition to providing a comprehensive survey of the different types of null subject phenomena exhibited across creoles, I will also provide an in-depth case study of Cape Verdean Creole (CVC), a creole language that directly contradicts the prediction made by the general theory. Using primary corpus data, I will show that CVC instantiates a remarkably wide range of pro-drop phenomena despite completely lacking the rich morphological inflection found in other natural languages. In light of this evidence, the objectives of this paper are twofold: first, to show that creole languages are capable of instantiating pro-drop symptoms despite their lack of inflection, and second, to offer a fresh analysis of the null subjects observed in our case study of CVC from within a Minimalist framework.

This paper consists of four parts. In Chapter 2, I will provide a detailed theoretical overview of null subject languages and how they have been analyzed. I will begin by looking at the foundational literature (Chomsky 1981, Rizzi 1982, 1986, Huang 1984), followed by an examination of a variety of alternative and contemporary analyses.   These analyses will shed light on the complexities associated with defining morphological "richness," as well as showcase how null subjects, and their associated parameters under Government and Binding, have begun to be reanalyzed from a Minimalist perspective. I will then turn to an overview of the various analyses surrounding the acquisition of null subject languages, focusing first on whether a single grammatical parameter setting for pro-drop, if it were to exist, could be considered "default."

This, in turn, will lead to a consideration of what implications such "default," or "unmarked," settings in language acquisition could have for creole languages' ability to exhibit pro-drop symptoms. In Chapter 3, I will provide an overview of the various ways in which creole languages manifest these pro-drop symptoms, as well as how pro-drop has been analyzed and typologized in certain creoles. This chapter will highlight the diversity and variety found in creole languages' use of null subjects, contrary to what would be expected and predicted under traditional analyses centered on the need for rich inflectional morphology in null subject languages. I will first review the various types of non-argumental null subjects that are commonly observed in an array of creole languages across the world. I will then consider the case of Bislama as an example of a split pro-drop system, as well as discuss evidence for its use of argumental null subjects. Finally, I will provide a brief overview of the ways in which null subjects have been analyzed in Haitian Creole, and subsequently in Cape Verdean Creole, which will serve as a foundation for the data and analysis presented in the final chapters. In Chapter 4, I will examine primary corpus data from CVC, providing evidence for its use of both expletive and argumental null subjects, including null pronominals in root contexts. Following this, I will offer in Chapter 5 a theoretical analysis of the Cape Verdean data from a Minimalist standpoint, based on Baptista and Bayer (in preparation). Chapter 6 will then summarize and draw the conclusion of this work as a whole.

Through my examination of pro-drop phenomena in creole languages, it is my intent to contribute to our increasingly complex understanding of how null subjects operate cross-linguistically. The special case presented by creoles, in their ability to instantiate a range of pro-drop phenomena despite their dearth of inflectional morphology, certainly deserves significant consideration. Thus, it is my hope that the primary data and analysis offered in this paper will

add an enlightening dimension to the cross-linguistic pro-drop typology, and help to further the work of recent Minimalist approaches to null subjects and their derivation.

CHAPTER 2: THEORETICAL OVERVIEW OF NULL SUBJECT LANGUAGES

2.1   Foundational Background

The early literature of the theory behind null subject languages relied heavily on the idea that the rich agreement exhibited by null subject languages must be responsible for recovering the features of the missing subject. In Section 2.1.1, I outline the first instantiation of the *pro-drop parameter* as put forth by Chomsky (1981), and then examine Rizzi's (1982, 1986) follow-up work on this parameter, including his influential analysis of the licensing and identification of *pro*. Section 2.1.2 goes on to discuss Huang's (1984) work on Chinese and how such a language that lacks inflectional agreement is able to be incorporated into the null subject theory and typology.

2.1.1   The Pro-drop Parameter and Recoverability

Chomsky (1981) provides the foundational sketch of what he terms the *pro-drop parameter*. He proposes that in languages like Italian, which permit null subjects, this parameter is switched to the pro-drop setting, while in languages like English or French, which do not permit null subjects, this parameter is not. He argues that data from these languages supports the idea that the setting of this parameter must involve the agreement element Agr (Chomsky 1981: 241). The basic premise follows intuitively from the notion that when there is overt agreement present, the subject can be dropped because the speaker is able to recover the subject from the agreement morphology (Chomsky 1981: 241). This assumption is supported in the juxtaposition

between a language with a rich inflectional system (Italian-type), which permits the dropping of the subject as in (1), and a language without rich verbal inflection (French-type), which does not, as in (2).:

(1)   *ho*   *mangiato*   (Italian)
          have-1SG   eaten
          'I ate'

(2)   **(J') ai*   *mangé*   (French)
           I have-1SG eaten
          'I ate'

The key idea here, and one that keeps recurring in the analyses that follow, is that there must be some property of Agr, itself linked to the overt morphology, that is the differentiating factor between pro-drop and non-pro-drop languages.

Although much of the early literature makes reference to a single parameter, Rizzi's (1982) first formulation of the *null subject parameter* actually specifies two separate parameters within the "null subject phenomenology":

(3)   a. INFL can be specified [+ pronoun].
          b. INFL which is [+pronoun] can be referential.
          (Rizzi 1982: 143 (75))

Rizzi (1982: 143) views the parameter in (3a) as "the theoretical statement of the Null Subject Parameter: languages may vary in having it or not." Thus, (3a) is what distinguishes between non-pro-drop and pro-drop languages, while (3b) applies in a subset of (3a) and is what distinguishes between null subject languages that allow all types of null subjects, and null subject languages that allow only non-referential (expletive) null subjects. The difference between these two types can be seen in the contrast between Italian and German. In regards to referential null subjects, Italian allows them while German does not:

(4) a. *bevo*   (Italian)
      drink-1SG
      'I drink'

    b. **(Ich) trinke*   (German)
       I   drink-1SG
      'I drink'

However, we see that German does allow expletive null subjects in impersonal passive

constructions:

(5)   *Gestern   wurde (*es) gesungen*
         yesterday was   (it)   sung
         'Yesterday there was singing'

This distinction, while now reanalyzed (see Holmberg (Chapter 2) in Biberauer, et al. 2010), is

an important component of contemporary typologies of null subject languages.

Rizzi's (1986) follow-up work on null subjects continues the line of reasoning formulated

by Chomsky (1981), referring back to the "natural intuitive idea" behind analyzing the null-

subject (pro-drop) parameter as founded in the recovery of the content of *pro* through a rich

system of agreement (Rizzi 1986: 36). Rizzi suggests that *pro* is licensed when it is governed

by a head X_y^0, which will vary cross-linguistically. The content of *pro* is then recovered, or

identified, by being given the grammatical specification of the features of its licensing head X_y^0

(Rizzi 1986: 36-37). Therefore, Rizzi concludes, when *pro* is in subject position, the features of

agreement of the local licensing head INFL are coindexed with and specified on *pro*, allowing

the speaker to identify the missing subject.

Chomsky (1981) and Rizzi's (1982, 1986) seminal literature provide the theoretical

groundwork for what has become the canonical account of null subject languages. Inflectional

agreement provides the necessary information to recover the missing subject, and is the

differentiating and determining factor in the divide between languages that allow null subjects

and those that do not.   The basic null subject typology under these accounts is thus one in which languages are categorized based on the presence or absence of overt subject pronouns.   As we will see, this typology requires further refinement to account for instances of what has been termed "topic-drop" in East Asian languages like Chinese.

2.1.2   "Zero Topic" Languages: The Case of Chinese

Huang (1984) provides the first major challenge to the straightforward split between pro-drop and non-pro-drop languages that is assumed in much of the founding literature.   The distinction thus far has been rooted in the notion of recoverability, which seems to correlate with systems of rich inflectional morphology, and more specifically, of agreement (Huang 1984: 534). Thus, as put forth in Chomsky (1981), pro-drop languages allow pronouns to be dropped from subject position in tensed clauses because their rich inflectional agreement systems give speakers enough information to recover the reference of the missing subject (Huang 1984: 535). However, Huang points out that we run into a problem once we take into consideration a language of a third type, like Chinese. These languages do not have systems of verb-subject or verb-object agreement, meaning a recoverability theory would predict them to prohibit both zero subjects and zero objects (Huang 1984: 537). Huang's data shows that precisely the opposite is true – they allow both – and therefore something else must be at play.

Huang resolves this problem by arguing that the Chinese-type languages differ from the others in that they allow a "zero topic" to bind a variable, and thus that they are "topic drop" instead of "subject drop" (Huang 1984: 545). He proposes that there are not one, but two, parameters involved in drawing the observed distinctions between these languages (Huang 1984: 549). The first parameter distinguishes between zero-topic languages, like Chinese, and non-

zero-topic languages, like English or Italian.   This parameter falls under a broader parameter that differentiates between discourse-oriented and sentence-oriented languages (Huang 1984: 549). The second is what we have already named the *pro-drop parameter*, which distinguishes between languages allowing zero subjects in tensed sentences and those that do not.

While Huang's (1984) analysis shows that we are dealing with a more complex typology than a simple two-way split (one that will become increasingly more complex as time goes on), it too relies on the notion of recoverability. Aside from upholding the already established pro-drop parameter to distinguish among non-zero-topic languages, it also assumes that zero-topic languages are discourse oriented, and thus enable the missing *pro* to be recovered through a preceding antecedent in the discourse. The basic principle still stands that pro-drop languages require a method of recoverability for the missing *pro*, otherwise this absence will not be permitted.

While Rizzi's work on pro-drop languages and Huang's on topic-drop languages are thus far complementing each other, the studies that I will cover in the next section show the deficiency of these foundational works with respect to other languages, such as German and Icelandic. As we will see in work done by Jaeggli and Safir (1989), Müller (2005), and Tamburelli (2006), the concept of rich morphological inflection as the sole predictor of pro-drop is problematic, requiring revisions of both the theory and what constitutes "richness" itself.

2.2   Alternative and Contemporary Analyses

Since the early work on null subject languages, many empirical and theoretical challenges to the foundational analyses of Chomsky (1981) and Rizzi (1982, 1986) have been

raised. One major concern is that the notion of inflectional "richness" has proven difficult to pin down and define in a way that predicts the presence of null subjects cross-linguistically Section 2.2.1 explores some of the proposals to deal with this problem. Additionally, in moving away from the Principles and Parameters framework of Government and Binding Theory and into the Minimalist Program, explaining and categorizing null subject languages necessarily requires a theoretical reanalysis, discussed in Section 2.2.2.

2.2.1   Rethinking "Richness"

Morphological Uniformity of Inflectional Paradigms

Jaeggli and Safir (1989) assume a parametric approach to linguistic variation, in which parameters can be set in a given direction based on the data provided to the speaker during language acquisition (Jaeggli and Safir 1989: 2). They also recognize the seemingly "implicit" connection between agreement and recovery that is asserted in the foundational literature. Acknowledging this assertion, they state that all studies on null subject phenomena "agree that it is the special status of the inflectional system of a language and its agreement markers that allows null subjects" (Jaeggli and Safir 1989: 21).

However, Jaeggli and Safir exhibit some skepticism in the feasibility of successfully comparing "inflectional richness" on a cross-linguistic level (Jaeggli and Safir 1989: 27). Additionally, they pose the question of why some languages allow *only* expletive null subjects but not thematic ones. They proceed to categorize null subject languages into three categories: the canonical Spanish/Italian type, the German type (no thematic null subjects, but expletive null subjects allowed), and the Chinese/Japanese type in which null subjects are allowed but there is no verbal inflection (Jaeggli and Safir 1989: 28). To address the problems they see with an

inflectional richness-based approach, Jaeggli and Safir abandon this notion and propose a null

subject parameter based on the morphological uniformity of inflectional paradigms (Jaeggli and

Safir 1989: 29).   Morphological uniformity, in their argument, refers to an inflectional paradigm

that is composed entirely of either underived forms (morphologically same as the stem) or

derived forms (affixes added to stem) (Jaeggli and Safir 1989: 30).   A given paradigm is thus

morphologically uniform if all the forms in the paradigm are morphologically complex or if none

of them are. The Null Subject Parameter put forth by Jaeggli and Safir is therefore formulated as

follows:

(6)   *The Null Subject Parameter*
Null subjects are permitted in all and only languages with morphologically
uniform inflectional paradigms (Jaeggli and Safir 1989: 29)

As evidence in support of this proposal, they show that English and French lack uniformity, and

thus their proposal correctly predicts that these languages do not allow null subjects. The

English and French paradigms are given below:

(7) a.   to talk   infinitive   (English)
         talk   present 1s, 2s, 1pl, 2pl, 3pl
         talk-s   present 3s

    b.   [parl-e]   infinitive   (French)
         [parl]   present 1s, 2s, 3s, 3pl
         [parl-õ]   present 1pl
         [parl-e]   present 2pl

What we see is that there are both morphologically complex forms and forms that are the same

as the bare verbal stem, thereby resulting in paradigms that are not morphologically uniform. In

contrast, the paradigms of Spanish, Italian, and Chinese are indeed all uniform. In the cases of

Spanish and Italian, each form in the paradigm is morphologically complex, and in the case of

Chinese, none of the forms are complex. Both types are then considered to be morphologically

uniform and are thus correctly predicted to allow null subjects.

Jaeggli and Safir (1989) thus offer us an alternative and more concrete definition as to how we should interpret morphology in relation to the licensing of null subjects. While the specifics of their argument no longer hold much import in light of more recent theoretical developments, they provide a step towards conceiving of morphological inflection in null subject languages in a more complex way.

Distributed Morphology and Impoverishment

Müller (2005) argues that Jaeggli and Safir's (1989) analysis is no longer viable with contemporary theoretical morphology. Under such recent theoretical developments, paradigms are thought of as epiphenomena, "i.e. descriptive generalizations that principles of grammar cannot refer to by definition" (Müller 2005: 2). He attempts to capture the idea of morphological richness based on the idea of *impoverishment* in Distributed Morphology. Impoverishment refers to a morphological operation affecting morphemes' contents before Spell-Out. Specifically, impoverishment deletes certain morpho-syntactic features from morphemes, resulting in the insertion of lesser-specified vocabulary items during Spell-Out. Rules of impoverishment, therefore, "neutralize differences between syntactic contexts in morphology," because more highly-specified morphological markers no longer fit in impoverished settings (Müller 2005: 3). It is this lack of specificity that Müller sees as crucial for the absence of pro-drop, leading him to argue: "*pro* cannot be licensed by T if T is subject to an impoverishment operation that leads to a neutralization of ϕ-features" (Müller 2005: 2).

Some basic concepts of Distributed Morphology must first be brought to light in order to unpack Müller's analysis. Following Chomsky (1995), functional morphemes such as v and T are assumed to possess fully specified morpho-syntactic feature bundles in syntax that do not yet

have any phonological material. From here we get the key idea of *late vocabulary insertion*, the post-syntactic operation pairing phonological and morpho-syntactic features. Furthermore, as previously described, deletion operations that occur between syntax and vocabulary insertion may affect the morpho-syntactic specifications of functional morphemes. These rules of impoverishment delete certain morphological features in certain contexts and thus result in the insertion of less specific morphological markers. Müller describes this as "a retreat to the general case," one that may result in syntactically (LF) distinct feature bundles being realized as the same vocabulary item once they reach PF. He argues that we can observe these operations by looking at the "system-defining syncretisms" found in verbal inflection paradigms, which he analyzes using impoverishment rules.

Looking at the verbal inflection in German, Müller provides the following rules of impoverishment:

(8)   *Impoverishment rules for German verb inflection:*
         a. $[\pm 1] \rightarrow \emptyset/[-2,-pl,+past]$
         b. $[\pm 1] \rightarrow \emptyset/[-2,+pl]$
         (Müller 2005: 5 (9))

The first rule deletes the first-person feature in non-second person singular past tense, and the second rule deletes it in non-second person plural for all tenses. This means that first and third person cannot be distinguished morphologically in singular past tense or in any of the plural forms because their only distinguishing feature ($[+1]$) has been deleted (Müller 2005: 5). In other words, the rules neutralize the distinctions of ϕ-features and leave only the singular present tense context available for distinction between the first and third person. The results of these can be observed below:

(9)   a. *Weak conjugation*   b. *Strong conjugation*   c. *Suppletive conjugation*
      glauben ('to believe')   rufen ('to call')   sein ('to be')

	Present	Past
1.SG	glaub-e	glaub-te
2.SG	glaub-st	glaub-te-st
3.SG	glaub-t	glaub-te
1.PL	glaub-en	glaub-te-n
2.PL	glaub-t	glaub-te-t
3.PL	glaub-en	glaub-te-n

	Present	Past
1.SG	ruf-e	rief
2.SG	ruf -st	rief-st
3.SG	ruf -t	rief
1.PL	ruf -en	rief-en
2.PL	ruf -t	rief-t
3.PL	ruf -en	rief-en

	Present	Past
1.SG	bin	war
2.SG	bi-st	war-st
3.SG	is-t	war
1.PL	sind	war-en
2.PL	seid	war-t
3.PL	sind	war-en

After the impoverishment rules have applied, the following inflectional markers are assumed to be inserted via late vocabulary assertion, accounting for the observed syncretism:

(10)   *Vocabulary items*:
       a. /te/ ↔ [+past,–strong]
       b. /s/ ↔ [+2,–pl]
       c. /n/ ↔ [–2,+pl]
       d. /t/ ↔ [–1]
       e. /(e)/ ↔ [ ]
       (Müller 2005: 5 (10))

Müller emphasizes that in this Distributed Morphology analysis of German, impoverishment rules are crucial in that they both provide an account for the observed syncretism patterns and allow for a "maximally simple inventory of inflection markers." (Müller 2005: 6).

     With the empirical groundwork of impoverishment rules established, Müller argues that it is rules like these that make argumental pro-drop impossible in German because the impoverishment of φ-features results in insufficient morphological richness (Müller 2005: 7). However, such an analysis must assume a new conception of inflectional morphology that is pre-syntactic instead of post-syntactic, meaning impoverishment is pre-syntactic as well. This crucially means that when the decision to license *pro* is made, the information about whether T has been affected by impoverishment will indeed be available. He argues that a pre-syntactic conception of inflectional operations follows naturally from the assumptions of the Minimalist

Program, meaning inflectional morphology would be located in the numeration and driven by uninterpretable inflection class features (see Müller 2005 Section 4 for expanded discussion). Therefore, given the principles of Minimalism, Müller concludes that a pre-syntactic conception of φ-feature impoverishment is indeed the right one.

Returning to the licensing of *pro,* Müller advances the "*pro* generalization":

(11) An argumental *pro* DP cannot undergo Agree with a functional head α if α has been subjected (perhaps vacuously) to φ-feature neutralizing impoverishment in the numeration.
(Müller 2005: 10 (13))

Applying this to German, we now have an explanation for why it disallows argument *pro* despite having what appears to be a relatively rich inflectional system. The functional head T is affected by impoverishment rules in the numeration, which under Müller's analysis leads us to correctly predict that argument *pro* is not possible (Müller 2005: 10).

In summary, Müller argues that the concept of morphological richness is dependent upon abstract restrictions on systems of morphology, namely impoverishment rules, which have been advanced independently in Distributed Morphology. His argument involves the development of a pre-syntactic analysis of morphology, incorporating the core principles of both Distributed Morphology and Minimalism.

Feature Opposition

In a return to the concept of paradigms dismissed by Müller (2005), Tamburelli (2006) presents another analysis to account for two major problems facing an agreement-based analysis of pro-drop, namely: 1) the inability to formally define what, exactly, constitutes "rich" agreement and 2) the existence of languages that do not allow pro-drop, but which are inflectionally rich (i.e. Icelandic). While empirical issues with using inflectional-richness as an

explanation for pro-drop led Jaeggli and Safir (1989) to abandon this notion, Tamburelli argues

that it still plays a key role, but needs to be defined in a more specific and useful manner. To do

this, he proposes that feature opposition can provide a sufficient definition that is successful in

capturing the cross-linguistic distribution of pro-drop.

Tamburelli assumes that the *speaker*, *addressee* (ad), and *singular* features allow a binary

distinction, positive (+) or negative (-), or may also be underspecified (α, ß) (Tamburelli 2006:

441). Under this assumption, the Italian paradigm is represented as follows:

(12)   Italian paradigm: Inf: parlare ('to speak')

1sg	parl-**o**	+sp αad +sg	1pl	parl-**iamo**	+sp αad -sg
2sg	parl-**o**	-sp +ad +sg	2pl	parl-**iamo**	-sp +ad -sg
3sg	parl-**o**	-sp -ad +sg	3pl	parl-**iamo**	-sp -ad -sg

(Tamurbelli 2006: 443 (6))

Here we see that both first person singular and plural forms are underspecified for

addressee, meaning that an ambiguity results in the first person plural form as to whether the

addressee is included in its referent or not. Such ambiguity does not actually present itself in the

first person singular form because the +sg feature inherently prohibits a reading of inclusiveness

(Tamburelli 2006: 443). All the other features in the paradigm are specified one way or the other

and each feature has both a positive and negative setting somewhere in the paradigm, a point

Tamburelli argues is important for deriving Italian's "richness."

The traditional assumption, of course, is that rich agreement can license pro-drop because

the inflectional morphology identifies the missing pronoun. Tamburelli remarks that it would

thus be assumed that a given inflectional paradigm is rich if it unambiguously instantiates its

formal properties. However, what he proposes is instead that "a paradigm unambiguously

instantiates its formal properties if and only if it realizes each possible feature opposition"

(Tamburelli 2006: 443). Said differently, such "unambiguous instantiation" would occur when each of a paradigm's possible features has *both* a positive and a negative setting somewhere in the paradigm, such as in the Italian example above.

This of course means that paradigms in which each feature is not distinguished will not be considered "rich" and will therefore not allow pro-drop. Tamburelli argues that this analysis provides a solution for the challenging cases of German and Icelandic:

(13)   German paradigm: Inf: spazier-en ('to walk')

1sg	spazier-**e**	+sp αad +sg	1pl	spazier-**en**	
2sg	spazier-**st**	-sp +ad +sg	2pl	spazier-**t**	-sp αad ßsg
3sg	spazier-**t**	-sp αad ßsg	3pl	spazier-**en**	

(Tamurbelli 2006: 444 (7))

(14)   Icelandic paradigm: Inf: seg-ja ('to say')

1sg	seg-**i**	+sp αad +sg	1pl	seg-**jum**	+sp αad -sg
2sg	seg-**ir**	-sp αad +sg	2pl	seg-**ið**	-sp +ad -sg
3sg	seg-**ir**	-sp αad +sg	3pl	seg-**ja**	

(Tamurbelli 2006: 445 (8))

In the German paradigm, we see that there is not feature opposition for either the *singular* feature or the *addressee* feature (only positive or underspecified). The first and third person plural forms are completely unmarked and the third person singular and second person plural are only marked for speaker. Similarly, in the Icelandic paradigm, there is not feature opposition for the *addressee* feature because only the second person plural marks a value for this (Tamburelli 2006: 444-45).

Tamburelli crucially notes that this does not mean that every form needs to be distinguished on the paradigm or that a paradigm must necessarily lack forms that are

underspecified (Tamburelli 2006: 445). Portuguese, for example, still has a rich paradigm

despite instances of underspecification:

(15)   Portuguese paradigm: Inf: compr-ar ('to buy')

1sg	compr-**o**	+sp αad +sg	1pl	compr-**amos**	+sp αad -sg
2sg	compr-**as**	-sp +ad +sg	2pl	compr-**ais**	-sp αad -sg
3sg	compr-**a**	-sp -ad +sg	3pl	compr-**am**	-sp αad -sg

(Tamurbelli 2006: 445 (9))

In Portuguese, the full opposition is realized even though the *addressee* feature is underspecified

in four out the six forms. What is important is that both a positive and a negative opposition

exist on the paradigm, here in the second and third person singular forms, meaning that it

qualifies as rich and we are led to correctly predict that it allows pro-drop (Tamburelli 2006:

446).

In summary, Tamburelli argues that when languages contain distinguishable morphology

between a positive and negative setting for features of *speaker*, *addressee*, and *singular*, they fall

into the category of "morphologically rich," while languages without such distinctions do not

(Tamburelli 2006: 453). Languages that qualify as rich under this new definition also allow pro-

drop, following the intuition of the canonical literature on null subjects.

Conclusion

What these proposals show us is that the notion of "richness" remains problematic and

how best to define this concept is still up for debate. In addition, the intuitive connection

between rich inflectional agreement and instances of pro-drop binds these arguments together.

We will see that this thread continues in recent attempts to reconcile the theories put forth in the

Minimalist Program with the ongoing search for an analysis and typology of null subjects.

2.2.2 Null Subjects in Minimalism

Null Subjects and Feature Theory

Holmberg (2005) argues that Rizzi's (1986) *pro*-licensing analysis cannot be upheld against a feature-valuing theory that distinguishes between interpretable and uninterpretable features as outlined in Chomsky (1995, 2000, 2001). Chomsky (2001) claims that unvalued uninterpretable features need to be valued in order to be removed from the derivation before the interface at LF. He assumes that the uninterpretable φ-features of I get their value from being in an Agree relation with the subject DP, which has fully specified and interpretable φ-features and can thus value those of I. This assumption is problematic for Rizzi's analysis, as Holmberg shows that Rizzi's condition that *pro* must be identified through the features of I is now no longer tenable given that, "it is obviously not possible for an inherently unspecified pronoun to be specified by the φ-features of I, as those features are themselves inherently unspecified" (Holmberg 2005: 537).

To reconcile this issue, Holmberg considers both possible options: either I or *pro* needs to have interpretable (valued) φ-features that can value the φ-features of the other.   The subsequent hypotheses are as follows:

(16)   *Hypothesis A*: there is no *pro* in null subject constructions, but rather Agr (set of φ-features of I) is interpretable and also a referential, definite pronoun. Agr itself may be assigned the subject θ-role, or SpecIP may possibly contain an expletive *pro* (to satisfy the EPP).
Hypothesis B: pro has interpretable φ-features and values the uninterpretable features of Agr, moves to SpecIP, and behaves just like an overt subject pronoun. The nullness of *pro* is purely phonological – it is just an unpronounced pronoun. (Holmberg 2005: 538)

There is one key empirical difference between the two hypotheses. Hypothesis A predicts that SpecIP is either not projected at all or it contains an expletive *pro*, based on whether Agr is able to satisfy the EPP or not, respectively. Hypothesis B predicts that SpecIP contains *pro*, which

has moved there to check the EPP, and thus there is no possibility for an expletive to be available in such a construction (Holmberg 2005: 538).   With regards to a language with referential null subjects as well as an overt expletive, Hypothesis A predicts that the two could co-occur. Hypothesis B, on the other hand, completely bars the possibility of an overt expletive occurring with a null subject. While the general assumption is that null subject languages would not exhibit overt expletive pronouns, Holmberg shows that Finnish does indeed have such an overt expletive, which will therefore provide evidence to choose between the two hypotheses.

Holmberg shows that Finnish has both optionally null subjects and an overt expletive pronoun, *sitä*:

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

　　　　b.　　*Sitä　　meni nyt　hullusti.*
　　　　　　EXP　　went now wrong
　　　　　　'Now things went wrong.'
　　　　　　(Holmberg 2005: 539 (8a), 541 (13c))

In terms of determining the correct hypothesis, the data shows that the overt expletive pronoun *sitä* cannot occur in the same context as a referential null subject:

(18)　　a.　　**Sitä　puhun　　englantia.*
　　　　　　 EXP　speak-1SG　　English
　　　　　　'I speak English.'

　　　　b.　　*Oletteko　(*sitä)　käyneet Pariisissa?*
　　　　　　be-2PL-Q　EXP　visited　Parise-INE
　　　　　　'Have you been to Paris?'
　　　　　　(Holmberg 2005: 543 (21a,b))

Holmberg concludes that the correct predictions are borne out by Hypothesis B. SpecIP is filled by *pro*, which checks the EPP and thus results in the ill-formed sentences in (18a,b) because the expletive has nothing to fulfill in these constructions (Holmberg 2005: 544).   As previously

stated, the null subject *pro* is concluded to have interpretable φ-features that value the unvalued features of Agr, and it is simply a pronoun that is not pronounced (Holmberg 2005: 548).

Holmberg goes on to propose a typology of three different types of null subjects: 1) a null weak, deficient pronoun that has specified φ-features but lacks D, meaning it cannot corefer without getting help from a D-feature in I; 2) a deleted DP; and 3) what Holmberg terms "classical pro" (not to be confused with the canonical *pro* from the foundational literature), meaning a bare noun without φ-features found only in languages without Agr (since the previous analysis stipulates that in languages with Agr, the subject must have valued φ-features so it can value Agr) (Holmberg 2005: 534). The first type is the null subject found in canonical null subject languages such as Italian and Spanish, the second is the fully specified deleted DP pronouns found in Finnish, and the third type is found in languages such as Chinese and Japanese as discussed in Huang (1984). Leaving aside the third case, Holmberg answers his title question, "Is there a little pro?," by concluding that the null subject is "either a null pronoun that is specified for φ-features but lacks D… or a fully specified pronoun with D, which is deleted in the phonology" (Holmberg 2005: 559).

In regards to where this leaves the connection between null subjects and inflectional richness, Holmberg briefly posits that this identification is due to sentence processing, not to narrow syntax as the founding literature suggests. He argues that it is obvious that sentence processing relies heavily on phonological features, while narrow syntax is "oblivious" to the ultimate pronunciation, or not, of pronouns and inflection. Recovery of the null subject will not succeed if agreement is not adequately distinct, or additional discourse information will be needed (Holmberg 2005: 560).

Deletion Analysis

Roberts (2010) offers a new proposal for analyzing *pro* in consistent, inflectionally rich null subject languages, which builds upon the ideas developed by Holmberg (2005). We have seen that Holmberg shows that Rizzi's (1986) *pro*-licensing analysis cannot be maintained in light of the feature-valuing theory put forth by Chomsky (as discussed in Section 2.2.1). He goes on to conclude that *pro* occupies SpecTP and is an unpronounced pronoun. Roberts comments, "[c]learly one way to see this is in terms of deletion: *pro* is a deleted pronoun" (Biberauer et al. 2010: 62). This idea forms the conceptual basis for Roberts' analysis.

Before he proceeds, Roberts first lays out an account of cliticization/incorporation, from which the following characterization is developed (see Biberauer et al. 2010 Chapter 1 for full discussion):

(19)   A probe P can act as an incorporation host for a goal G only if P lacks an EPP-feature capable of attracting G.
(Biberauer et al. 2010: 68 (13'))

The characterization in (19) is due to the fact that, because cliticization is triggered by Agree, the presence of an EPP-feature would require the probe to Agree with the goal and entail that the goal would need to create a specifier in order to satisfy the EPP. The goal would thus no longer be able to incorporate because "incorporation can take place only where the features of the incorporee are properly included in those of the incorporation host" (Biberauer et al. 2010: 65 (10)). Following this line of reasoning, Roberts proposes that a defective goal is defined as follows:

(20)   A goal G is defective iff G's formal features are a proper subset of those of G's probe P.
(Biberauer et al. 2010: 70 (16))

He argues in a similar fashion that a defective goal needs to be incorporated into its probe, and thus that the probe cannot have an EPP-feature or the goal will not be incorporated.

Returning to *pro*, Roberts concludes that *pro* appears in SpecTP, following Holmberg's (2005) analysis, but classifies it as a DP instead of a φP proposed by Holmberg. Given that *pro* is a DP and occupies SpecTP in Italian, Roberts assumes that this movement occurs in order to satisfy the EPP. Further evidence for *pro*'s ability to satisfy the EPP comes from Holmberg's (2005) work:

(21) a. *Puhun   englantia*
         speak-1SG English
         'I speak English.'

      b. *Sitä meni nyt   hullusti.*
         EXP went now wrong
         'Now things went wrong.'
      (Biberauer et al. 2010: 75 (5))

The contrast between (21a,b) provides evidence that the *pro* in SpecTP in (21a) satisfies the EPP. Roberts argues that such evidence, in conjunction with (19), means that *pro* cannot be a clitic (Biberauer et al. 2010: 75).

The question of what triggers the deletion of *pro* remains. Roberts assumes, following Holmberg (2005), that Italian-type null subject languages have a D-feature in T, and that this D-feature has a correlation with rich inflectional agreement. Postulating a D-feature in T means that *pro* can be a defective goal under Roberts' definition since its D and φ–features are properly included in the features of T (Biberauer et al. 2010: 76). However, T has an EPP-feature as well, which is able to be satisfied by *pro*, as argued above. This results in a problem for Roberts' previous analysis, and he now argues that a defective goal, in this case *pro*, actually can satisfy an EPP-feature. He suggests the following:

(22)   Defective goals always delete/never have a PF realization independently of their probe.
        (Biberauer et al. 2010: 76 (26))

We observe that *pro* does not, and actually cannot, incorporate, but that it does delete.

Therefore, what we are left with is that *pro* is a defective goal as a result of the D-feature on T.

When T also has an EPP-feature though, *pro* is unable to incorporate since this is not possible

under the incorporation rule in (19). In spite of this, *pro* is not realized phonologically because

defective goals are always deleted under "feature identity with their probe" (Biberauer et al.

2010: 79).

In terms of the nature of *pro*'s non-overtness, Holmberg (2005: 559) concluded that a

null subject is either a null (deleted) pronoun or a pronoun that is not realized in the phonology.

While the main point that Holmberg is trying to make is that *pro* is like any other overt pronoun,

Roberts wishes to explore whether the deletion and non-realization options can be differentiated.

In doing so, he refers to the previously discussed concept of pre-syntactic impoverishment

developed by Müller (2005).

We have seen that Müller (2005: 10) argues that *pro* is unable to occur in languages

where T has been subjected to rules of impoverishment.   Roberts links this to the D-feature in T,

which he presumes to be a feature of definiteness. This means that the *pro* in consistent null-

subject languages has a definite-valued D-feature, and in its Agree relation with T, T's D-feature

is valued likewise (Biberauer et al. 2010: 81). Roberts assumes that a value of definiteness

requires that *all* of D's ϕ−features must be specified. Proceeding from this account, we know

that impoverishment rules delete some of a head's ϕ−features, and so this leads Roberts to

conclude that D could no longer be valued as definite. From here, the argument logically follows

that *pro* would then be unable to value D if any of T's features had undergone impoverishment,

since these features would now be absent. Therefore a T that has been subjected to impoverishment rules cannot have a D-feature (because the derivation would crash), and *pro* is then no longer a defective goal. If *pro* is not a defective goal, it is also unable to be deleted/unrealized at PF, reaffirming both Müller's conclusion and the connection between rich agreement and null subjects in consistent null subject languages (Biberauer et al. 2010: 82).

In terms of the nature of *pro*'s non-overtness, Roberts adopts Müller's argument for pre-syntactic inflectional operations. He argues that if Müller is correct on this issue, then *pro*'s 'nullness' cannot be viewed as it being phonologically unrealized at PF since this would stipulate inserting a null segment post-syntactically (Biberauer et al. 2010). This leads Roberts to conclude that *pro* is indeed a deleted pronoun.

Reconsidering Semi-Null Subject Languages, Expletives, and Expletive pro

Now turning the focus to semi null-subject languages, Biberauer (2010) proposes a theory that moves past the reliance on the agreement properties of I. She seeks to answer whether semi null-subject languages like German necessitate postulating expletive *pro*, and then she reconsiders the typological status of semi null-subject languages in general.

Thus far in the Minimalist Program, there have been two major approaches to null subjects. They have been analyzed as the result of either: 1) 'pronominal' agreement inflection with V_D-to-T movement satisfying T's EPP-requirements, or 2) deletable pronouns under T adjacency, as discussed in Section 2.2.2 (Biberauer et al. 2010: 161). She argues that both of these post-Government and Binding analyses raise concerns about expletive *pro,* and also allow for the grammatical possibility of T-specifications that do not require DP-raising to SpecTP (Biberauer et al. 2010: 164-66). The second point here means that it is theoretically possible for

some languages to not need expletive elements, and therefore, languages without overt expletives could possibly lack expletives entirely. This is contra the original EPP analysis, which would require languages without overt expletives to have null expletive counterparts instead. She goes on to argue that analyzing languages as lacking null expletives is indeed the correct analysis.

She focuses on SpecTP in Germanic languages, specifically on whether viewing SpecTP as reserved exclusively for subjects is a tenable view. This viewpoint is of course fundamentally critical in assuming the existence of expletive *pro*. What she argues is that SpecTP in some Germanic languages does not necessarily need to be filled by a subject, which calls into question the need to postulate an expletive *pro* (Biberauer et al. 2010: 167). Evidence from Icelandic involving stylistic fronting suggests just that:

(23) a. *það   hefur ____ verið tekin erfið   ákvörðun*
          there has   been taken difficult decision

      b. *það   hefur* **tekin** *verið erfið   ákvörðun*
          there has   taken been difficult decision
          'A difficult decision has been taken.'
          (Biberauer et. al 2010: 168 (18))

The SpecTP in (23a) is filled by the lower copy of *það*, and this same position in (23b) is filled by the fronted *tekin*. Stylistic fronting then poses a serious problem for the idea of SpecTP being filled by subjects exclusively, and thus whether Icelandic needs null expletives at all (Biberauer et al. 2010: 169). Another problem is posed by contexts in Dutch in which expletive *pro* is in free variation with an overt expletive:

(24)   *… dat (er) gedanst werd*
          that there danced was
          'that there was dancing'
          (Biberauer et al. 2010: 169 (19))

In Government and Binding, this would have been problematic in regards to the Avoid Pronoun Principle, in which overt pronouns should never be found when null forms are possible. From a

Minimalist perspective, such data is also troubling, as we still would not expect to see overt and null counterparts in free variation. Biberauer argues that postulating expletive *pro*, while allowing us to uphold the original EPP, raises questions that seem to not have answers (Biberauer et al. 2010: 171).

She proceeds to propose a typology for the four different EPP-satisfaction strategies observed in Germanic languages:

Table 2.1   EPP-Satisfaction Strategies in Germanic and Other Languages

Language	Source of φ-features (goal)	EPP-movement
(i) English, Mainland	D(P) in Spec-*v*P	DP-to-SpecTP
(ii) Greek, Italian (*pro*-drop)	φ-features on V-morphology	v-to-T
(iii) German, Icelandic	φ-features on V-morphology	vP-to-SpecTP
(iv) Afrikaans, Dutch	D(P) in Spec-*v*P	vP-to-SpecTP

(Biberauer et al. 2010: 175 (24))

To briefly explain this typology, we see that languages vary in terms of both the goal's source and the size of the category containing the goal (which is then moved to satisfy the EPP-feature of T). There are two possible categories for the source of φ-features: 1) the DP located in Spec*v*P or 2) the agreement morpheme found on the verbal head in languages with rich systems of agreement (Biberauer et al. 2010: 175). Assuming that Agree-driven movement can both directly target goals directly or resort to *pied-piping*, we also see variation in the size of the category that is moved. Biberauer suggests thinking about (2.1 iii-iv) as "Italian/Greek-plus-pied-pipe" (head-pied-pipe) and "English-plus-pied-pipe" (spec-pied-pipe), respectively (2010: 175). The difference between the two lies in the richness of their inflection. The rich inflection in head-pied-piping languages means that V/v is an appropriate goal, while the inflectionally deficient spec-pied-piping languages must use the subject DP as the goal (Biberauer et al. 2010: 175).

Returning to expletive *pro*, this typology reaffirms that we do not need to postulate that an expletive must be inserted into SpecTP in all cases, since we see that the EPP may be satisfied by means of vP-fronting. For example, Biberauer argues that the German T probes vP for the verb's agreement morphology (V_D) in order to satisfy the EPP requirements:

(25) …*dass dem   Mann ein   Buch geschenkt wurde*
      …that the-DAT man   a-NOM book presented became

```
                        CP
                      /    \
                    C       TP
                  dass    /    \
                       vP        T'
                     /   \      /   \
                   VP    vdef   T    tvP
                  /  \   wurde
                DP    V'
             dem Mann  /  \
                     DP    V
              ein Buch  geschenkt
```
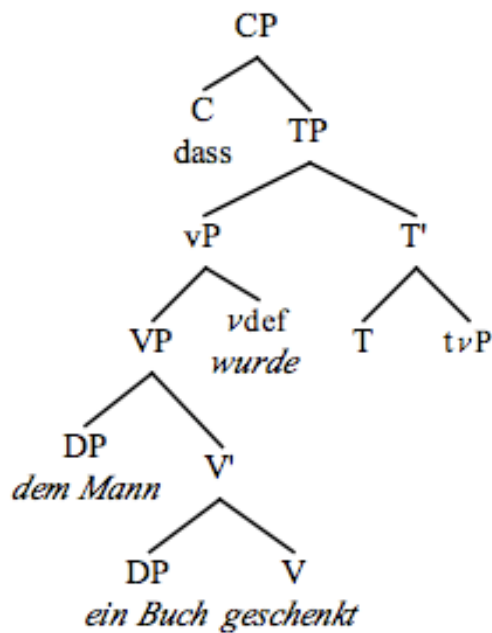
(Biberauer 2010: 177 (25))

In this example, Biberauer (2010: 177) assumes, "that the passive participle has 'absorbed' v's external argument, with the result that thematic Spec-vP fails to be projected." Thus, the EPP is satisfied via vP-fronting and an expletive does not need to be inserted into SpecTP. The same is true in Icelandic, as illustrated below:

(26)　*Í gær　　voru　　konunginum　gefnir　hestar*
　　　yesterday were-3PL king-the-DAT given horses-NOM

```
                    CP
                  /    \
              Spec      C'
              Í gær    /  \
                      C    TP
                     voru  /  \
                       Spec    T'
                       /\     /  \
                      vP     T    vP
                                 /  \
                                v    VP
                                    /  \
                                 Spec   V'
                             konunginum /  \
                                       V    O
                                    gefnir hestar
```
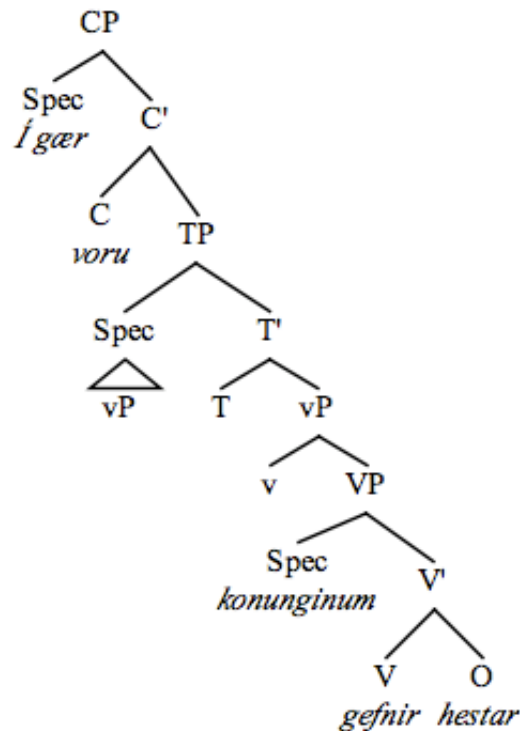
(Biberauer 2010: 177-78 (27))

Biberauer argues that these examples show that vP-fronting "preludes the need to postulate the merger of *pro$_{EXP}$* in SpecTP", and thus, her proposal is that we should abandon the idea that languages like German and Icelandic merge null expletives in SpecTP (Biberauer et al. 2010: 178).

What we have seen is that Germanic languages give us evidence that SpecTP cannot be viewed as a position solely reserved for subjects, and that we are not justified in postulating an expletive *pro* whenever an overt expletive is not present. Under a Minimalist theory of Probe-Goal-Agree, there appears to be parametric variation involved in T's association with movement, even within the family of Germanic languages (Biberauer et al. 2010: 197). Biberauer argues that "missing" expletives may be the result of very distinct parametric settings, and that this

means that a unified typological concept of semi null-subject languages cannot be theoretically maintained.

However, while Minimalism certainly calls for a restructuring of the ideas put forth under a Government and Binding approach to parameters, Biberauer asserts that a parametric account of null subjects has not become completely untenable. She has shown that T's feature specifications and the feature specifications of the lexical items and functional categories with which it is associated are exactly what determine whether expletive null-subject phenomena will occur. She concludes that "the original insight that parameter interaction underlies the availability of different types of null-subject systems therefore remains unchanged" (Biberauer et al. 2010: 199). Rather, what has changed is how we have come to understand parameters themselves, and from this we have been led to reanalyze superficially 'identical' phenomena as actually being the result of different parametric settings.

2.2.3   Contemporary Typology of Null Subject Languages

In light of recent literature, it is clear that a far more detailed and complex account of the typology of null subject languages has emerged and that it will continue to be debated. While early work concentrated primarily on the distinction between languages that permit null subjects and those that do not, this dichotomy has clearly proven far too simple and as we have seen, additional research has expanded on the differences *amongst* null subject languages themselves. While by no means the final word on the issue, Biberauer, et al. (2010) outlines a very useful four-class typology for categorizing and describing null subject languages. Under this typology, they acknowledge the existence of the more recently-observed "partial" null subject languages,

which allow unexpressed subject pronouns in certain restricted circumstances (Biberauer, et al 2010: 6). This typology is summarized in Table 2.2.

The first type of null-subject language in their typology is what they term a *consistent null-subject language*. These represent the "traditional" (Italian-type) idea of what constitutes a null-subject language, as discussed in the foundational works of Chomsky (1981) and Rizzi (1982, 1986). Consistent null-subject languages allow all persons in every tense to have an unexpressed pronoun, and they show the well-documented "rich" inflectional agreement systems we expect to find in instances of pro-drop (Biberauer, et al 2010: 6).

The second type of null-subject language is an *expletive null subject language* (although as we have seen in the previous section, such a unified category may now face theoretical problems). These languages allow null subjects that are expletives, but not null subjects that are referential (Biberauer, et al 2010: 8). Examples of expletive null subject languages include German, Dutch, Afrikaans, and a number of creoles. Such languages concern Rizzi's (1982: 143) second parameter of null-subject languages, which distinguishes between those allowing unexpressed referential pronouns and those that do not. While expletive null subject languages are positive on the first parameter of whether they allow an unexpressed pronoun at all, they are negative on the second parameter concerning referentiality. Such languages, also known as "semi-pro-drop languages," differ from consistent null-subject languages in their inability to omit referential pronouns (Biberauer, et al 2010: 8).

A third type are languages that are classified as *discourse pro-drop languages*. These are the languages first discussed in Huang (1984) that allow null subjects extremely freely, but lack the agreement marking we would traditionally expect to find in a pro-drop language (Biberauer, et al 2010: 8). Discourse pro-drop languages differ from consistent null-subject languages in

that they allow nominal arguments to be unexpressed in functions other than just the subject, and in their complete lack of a verbal person-agreement marking system (Biberauer, et al 2010: 9).

The fourth and final type is the *partial null-subject language*. This type has been harder to distinguish, but recent work provides evidence for several defining characteristics that separate these languages from the consistent "Italian-type" languages. Examples of partial null-subject languages include Finnish, Hebrew, Russian, and Brazilian Portuguese. Data from such languages show, for example, that null pronouns can only be freely expressed in some, but not all, person forms (i.e. in Finnish: 1st and 2nd person, but not 3rd). In addition, forms that do not freely allow omitted pronouns do not always completely prohibit them either, and can allow unexpressed pronouns in certain restricted contexts (Biberauer, et al 2010: 11). A third feature described in Holmberg (2005, cited in Biberauer, et al 2010: 11) is that "generic pronouns can, and must, be null." These differences provide justification for establishing partial null-subject languages as a distinct type.

Table 2.2 **Typology of Null Subject Languages** (based on Biberauer, et al 2010)

	Example	Null Subjects Allowed?	Verb Agreement?
Consistent	Italian	Yes	rich inflection
Expletive	German	Yes, but *only* expletives	some inflection
Discourse	Chinese	Yes (and null objects)	no inflection
Partial	Finnish	Sometimes – Restricted	some inflection

In light of the expanding cross-linguistic data on null subject phenomena and the variation amongst null subject languages, it is obvious that the foundational literature makes very strong predictions that now come up against an array of problematic counter-examples. One such issue, on which the second part of this chapter will focus, is where creole languages fit in the typology of null subjects. Another key component in any discussion surrounding the

syntactic make-up of creole languages is how a given creole acquired certain syntactic features during its genesis. This further entails questions surrounding both first and second language acquisition, as well as what role, if any, default settings play in the acquisition process. To fully appreciate the scope and implications of these issues as they relate to creoles, it is important to first look at how questions like these have been addressed in a broader sense. Therefore, before turning to an overview null subjects in creole languages, I will first examine some of the issues surrounding the acquisition of null subjects cross-linguistically.

2.3   Acquisition of Null Subject Languages

If we are to assume some form of parametric approach in our analysis of null subjects, an interesting question that arises is whether there is a default grammatical "setting" for a null subject parameter. In other words, do all children start with a certain preset that can be switched later on to the "correct" setting, if needed? As we will see later, the search for an initial or "unmarked" setting could possibly have important implications with respect to creole languages. This question has been debated heavily in the literature concerning dropped subjects in child language, and views on this issue generally fall into one of two camps: 1) those who contend that acquisition of null subjects is based in the parametric settings of the grammatical system, and 2) those who view missing subjects in child language as the result of performance and processing limitations. We will briefly explore the history of this debate and how it has progressed into contemporary research. I begin with the original parameter hypothesis for pro-drop as put forth by Hyams (1986), followed by performance-based critiques of her work argued by Bloom (1990)

and Valian (1990). I will then turn to some more recent work from Yang (2002), Rizzi (2005), and Hyams (2011) to examine the status of this issue as it stands today.

2.3.1   The Parameter Missetting Hypothesis

Hyams (1986) argues that the missing subjects observed in children's speech are the consequence of the child's grammar having a positive setting for the null subject parameter, as conceived by Chomsky (1981) and Rizzi (1982, 1986). Thus, she argues that a positive setting is also the initial setting for this parameter, and consequently, that the early grammars of all languages are null subject grammars. In regards to English, and other non-pro-drop languages, this means that the parameter is initially "misset" and requires triggering to be corrected.

Hyams analyzes data from English, showing that early-stage English grammars exhibit systematic "subjectless" sentences as well as a lack of expletive pronouns (*it/there*) and verbal auxiliaries (Hyams 1986: 63). She argues that this is evidence for concluding that so-called "early English" is a pro-drop language unlike its "adult English" counterpart (Hyams 1986: 64). This shift between early English grammar and adult English grammar represents the resetting of the null subject parameter. This "reset" is part of what Hyams refers to as a "continuous process" of grammatical development, in which not all principles of UG need to be specified initially (Hyams 1986: 169).

In order for the parameter to be switched to the "correct" setting in English, there must be primary linguistic data that triggers this to occur. Hyams returns to Chomsky's (1981) Avoid Pronoun Principle, which states that in Null Subject Languages a lexical pronoun is not used whenever a null pronoun is possible (Hyams 1986: 72). This means that lexical pronouns are not used if they are not needed for contrast/emphasis, etc, and so expletive pronouns are always

avoided. Hyams posits that the presence of lexical expletives in English could be the trigger to reset the parameter (Hyams 1986: 92).

This parameter (mis)setting hypothesis faces a number of empirical difficulties that will be touched upon below. However the central logic, namely that grammatical factors constrain the use of null subjects in child languages, remains theoretically appealing.

2.3.2   Performance and Processing Approaches

The major assertion made by performance-based approaches, against grammatical ones, is that null subjects in child language are the result of performance factors, not the child's grammar. Such accounts argue that English-speaking children know that sentences should have overt subjects, but they are constrained by performance deficits that result in their inability to produce them.

Bloom (1990) makes several important claims in regards to the missing subjects in child language. The first is that the presence of a subject increases the processing load imposed on children, a key limiting factor in children's use of subjects. He supports this claim with data showing that sentences produced by children without subjects have longer VP lengths on average than those with subjects (Bloom 1990: 495-97).   Secondly, he points out that children do not only omit subjects, but objects as well. This, he argues, is further evidence for the effects of performance constraints. In regard to the fact that subjects are omitted more frequently than objects, he claims that there is a greater processing load at the beginning of a sentence, which leads to subjects' more frequent omission (Bloom 1990: 501).   Bloom further argues that the correct assumption in terms of an initial parameter setting is that all children begin with non-pro-

drop grammars (Bloom 1990: 502). The shift in languages like Italian to the pro-drop setting occurs very early as a consequence of the triggering factor of subjectless sentences.

Valian (1990) presents another argument for a performance, or processing, approach. She argues that an analysis in which a single setting is available to the child cannot work, and rather that children must have access to both values initially. A major problem she finds with Hyams' (1986) proposal is what she refers to as the subset problem. If a child is exposed to evidence in English that overt subject are present, just as they sometimes are in languages like Italian, this child cannot conclude from such positive evidence that null subjects must be prohibited. Valian argues that because English-type languages are a subset of Italian-type languages, this poses a logical problem since positive evidence that confirms the subset also confirms the superset. If a single parameter is to be proposed as the initial setting, then it must be that null subjects are not allowed, which would later be switched in Italian grammars by positive evidence (presence of null subjects) to the contrary (Valian 1990: 108).

However, Valian asserts that even this solution will not hold because of limitations of the child's parsers. If the child only has one initial value, she will be unable to correctly interpret data that would contradict this. A child with an English-type grammar would not be able to interpret a null subject sentence from Italian as a sentence, because her English grammar parser would only label strings with overt subjects as sentences. Instead, these sentences would just be labeled VPs and would thus provide no evidence to contradict her English grammar. If on the other hand, as Hyams (1986) suggests, expletives provide the triggering factor for the parameter switch, we face a similar problem. An Italian-type parser would not be able to correctly interpret the expletive that occurs in an opposing non-null-subject parameter setting, and thus the problem remains (Valian 1990: 115). She concludes that this must mean that both parameter values are

initially available to the parser, and that through hypothesis-testing the child chooses the correct value.

Together, these arguments assert that processing limitations and performance factors are at play in the missing subjects in child language, rather than grammatical UG-related constraints. They also argue directly against the claim that the initial setting of the null subject parameter is to allow null subjects.

2.3.3   The Debate's Evolution up to the Present

Both the original parameter missetting hypothesis as presented by Hyams (1986) and the performance/processing accounts presented by Bloom (1990) and Valian (1990) face problems. Hyams (2011) provides a useful summary of how the debate and her own views have evolved, and where this leaves us today.

Problems on Both Sides

A notable problem with the notion that a parameter has an initial setting is why the alleged triggering data would not come into effect until around age 3. Children would obviously be exposed to these triggers before the stage at which their parameter would be reset (Hyams 2011: 18). Furthermore, in comparing English-speaking children with Italian-speaking children, Valian (1991) found that the English children exhibit far fewer null subjects (30%) than the Italian children do (70%). This calls into question whether the null subjects in English child language are indeed the same as those in a pro-drop language like Italian (Hyams 2011: 19).

On the other side, accounts relying purely on production limitations ran into problems as well. Empirical considerations directly contradicted several of their key claims (see Hyams and

Wexler (1993) for full discussion of statistical analysis). In addition, the argument that the observed difference in null subject omission between Italian and English-speaking children is the result of performance factors constraining the English-speakers is not valid. Theoretically, Hyams (2011) argues, there is no reason why fewer null subjects would result under a performance constraint than a grammatical one, and vice versa. Furthermore, processing accounts claimed that null subjects result when children drop a lexical NP or pronoun and that lexical NPs were more likely to be dropped than pronouns. Such claims would predict that as children move past performance limitations, we would observe an increase in lexical NPs as they would now be dropped less frequently. The data instead shows that pronoun usage increases over time and lexical NPs remain basically the same. This would actually be predicted under a grammatical approach, with children's pronoun use being expected to increase after they switch away from a grammar setting that would allow pronoun's null counterparts (Hyams 2011: 32).

Other Proposals

With early instantiations of the arguments from each side falling victim to empirical problems, several alternatives have since been proposed: most notably, Yang's (2002) Competing Grammars Hypothesis and Rizzi's (2005) Root Subject Drop Hypothesis.

Yang (2002) proposes a "variational model" to language acquisition, in which the child has access to multiple grammars to use in analyzing the input she receives. When a given grammar is successful in its analysis it is rewarded by being given heavier weight. Eventually, one grammar becomes so successful that it is able to eliminate the other competing grammars (see Yang 2002: Section 2.2 for a more detailed explanation). As applied to null subject phenomena, Yang argues that the hypothesis space begins by having three grammars: Italian pro-

drop, Chinese topic drop, and English non-null-subject (Yang 2002: 116). For English-speakers, the Italian grammar is ruled out quickly due to the lack of unambiguous agreement morphology in English. Chinese, however, is more difficult to rule out because the expletive *there* is the only evidence against it, and sentences containing this expletive occur only 1% of the time. This means that English-speaking children have both grammars in coexistence for a longer period of time (Yang 2002: 119). Interestingly, such an analysis provides an account for the null objects in English child language, as we would expect this under a Chinese-type grammar. However, some empirical concerns still arise under such an account. Notably, Hyams (2011: 23) points out that English null subjects are "heavily skewed towards non-finite contexts, especially root infinitives," which would be left unaccounted for in a variational approach given that Chinese null subjects do not have such a constraint.

Rizzi's (2005) proposal views dropped subjects in child English as instances of "root subject drop" (RSD), wherein null subjects are allowed in the specifier of the root. He argues that children begin with a positive setting for the RSD parameter as a way to cope with a limited system of production. More generally, he believes that this falls under a strategy in which children "adopt parametric values which reduce the computational load on the production systems and are not contradicted by positive evidence" (Rizzi 2005: 6 (7)). Such a strategy is viewed by Rizzi as initially allowing a superset language, here a null subject language. As the child and her production system mature, this strategy will be abandoned under pressure from the subset principle (Rizzi 2005: 7). This account thus predicts that children in non-pro-drop or topic drop languages will still drop root subjects initially. This would offer an explanation for first (root) position subjects being dropped, and it provides a difference between dropped subjects in languages like early English and null subjects in languages like Italian (Hyams 2011:

27). Of course, Hyams remarks that it is still debatable how heavily performance factors are actually involved in null subject phenomena. A "mixed processing-competence account" like Rizzi's can only be upheld given that evidence for performance constraints on subject omission is upheld as well (Hyams 2011: 46).

Moving Forward

Hyams (2011) asserts that the statistical and empirical evidence still does not provide compelling support for a purely performance-based account of the missing subjects of child language. Especially considering grammatical factors linked to null subjects, such as finiteness, it seems most likely that any existing production constraints are themselves located within a system of grammatical parameters (Hyams 2011: 46).   She concludes by acknowledging that it seems as if no single grammatical parameter setting account is yet able to cover all of the facts, and that this issue requires further research, stating "the jury is still out on the correct analysis of early null subjects" (Hyams 2011: 47).

2.4   Markedness in Creoles: Bickerton and Beyond

As we have seen in the previous sections, there is a great deal of debate over whether pro-drop constitutes a marked or unmarked setting cross-linguistically. This markedness debate also carries over to our investigation of creole languages. Here, the focus becomes whether creoles themselves represent instantiations of unmarked grammars, an argument most notably put forth by Derek Bickerton (1981, 1984) in his seminal work on the Language Bioprogram Hypothesis (LBH). While a substantial amount of research has provided evidence against the LBH in its

strongest form, Bickerton's work continues to exert a meaningful influence today. It is thus important in any examination of the syntactic features of creole languages to address the extensive research that has been devoted to the search for default grammatical settings in creoles, and the profound effect it has had on the field.

Bickerton (1984) views the *language bioprogram* as a default grammar that is activated when an unstable and deficient pidgin language is the input for the children involved in the process of creole genesis. This bioprogram, therefore, also serves as an explanation for why many creoles show certain structural similarities, such as their lack of inflectional morphology. While he admits that variation amongst creoles can also be observed, he argues that such variation is due to the amount of "deprivation" to which a given creole was subjected at its birth. Those whose environments showed a higher degree of chaos (and thus a lower degree of European influence) would therefore be closer to, and show more features of, the language bioprogram. The grammar of the bioprogram, as conceived under Bickerton (1984: 178), is thus: "the list of preferred settings that the child, in the absence of contrary evidence, would assume to be appropriate." Put differently, the LBH posits that creole languages resort to using the default settings of Universal Grammar, which constitute the innate bioprogram of linguistic competence.

The LBH remains a heavily debated topic that has had an enormous impact on the research in the field, despite the fact that much of the subsequent research has unearthed a multitude of evidence against it. Arends, Muysken, and Smith (1995: 322) note this juxtaposition, saying: "while there is no question that Bickerton's views are still quite influential among creolists, they are not shared by many of them in their most complete version."

One of the most important criticisms lobbied against the LBH is that the generalizations it makes with respect to prototypical creole features are largely untenable. As we will see in our

investigation of null subjects across creoles, these languages actually show a substantial amount of diversity, and finding any one prototype or default setting would prove challenging. This is also the case for a great number of other features of creole syntax that have since been examined following the proposal of the LBH, including determiner systems, TMA systems, verbal adjectives, copula systems, and finiteness. In Veenstra's (2008) examination of the impact of the LBH, he concludes that this profusion of research has made the great variety that exists amongst creole languages clear, and has thus made it less and less likely that Bickerton's notion of a "consistently uniform creole syntax" exists (Veenstra 2008: 229).

While the diversity observed across creoles is now evident, it is important to note that creole languages do also show a few significant similarities: SVO word order and dearth of inflectional morphology being two of the most striking. Veenstra (2008: 229) argues that there is thus "…a tension between unity and diversity of linguistic structures in creoles – a fact that creolists have to come to grips with." This juxtaposition provides an interesting and compelling foundation for further research, as well as for our examination and analysis of the diverse range of pro-drop phenomena observed across these inflectionally impoverished languages.

In an interview with Noam Chomsky, Baptista (2012) considers what role (un)markedness plays in the questions surrounding pro-drop in creole languages. Regardless of how we view pro-drop languages in terms of markedness, she says, we are faced with problems with respect to creole languages. Suppose we are to assume a standpoint in which pro-drop is the unmarked setting, as evidenced by the use of pro-drop constructions in child language (i.e Hyams 1986, Hyams and Wexler 1993). Given creoles' apparent tendency to lean towards unmarked settings, it would be problematic that many do not allow argumental subjects to be null. On the other hand, if we assume that pro-drop is marked, we face a similar problem on the

opposite side: many creoles do show pro-drop symptoms, so why would they choose this marked option? Baptista (2012: 360) notes that in either case it is difficult to reconcile how creoles could be seen as instantiating wholly unmarked grammars. The question becomes not *whether* creoles can adopt marked settings, but *how* and *why* such departures from the core grammar are possible.

2.5   Conclusion

In this chapter, I have provided an overview of the major proposals on pro-drop from the points of view of theoretical syntax and language acquisition. In the next chapter, I will discuss the pro-drop phenomena that have been observed across creole languages, and what creolists have said about the pro-drop statuses of the individual creoles they investigate. We will see that creole languages show a great deal of diversity in their usage of null subjects, which poses a problem to many of the proposals that I have examined in this chapter. It is this problem that will later serve as the starting point for our own analysis of pro-drop in Cape Verdean Creole, which I will return to in Chapters 4 and 5.

CHAPTER 3: NULL SUBJECTS IN CREOLE LANGUAGES

As we have seen in Chapter 2, the notion of "rich inflection" is heavily tied up in pro-drop statuses cross-linguistically. In this respect, creole languages present an interesting case given their characteristic dearth of inflectional morphology.   The presence of null subjects in these inflectionally impoverished languages thus adds another layer of complexity to a cross-linguistic typology of null subjects. To give a sense of the diversity of null subject occurrences observed across creoles, I will provide an overview of the various ways in which creole languages manifest pro-drop symptoms. In Section 3.1, I will begin with a review of the various types of non-argumental null subjects exhibited by a wide range of creoles in a variety of contexts. In Section 3.2, I will direct my attention to the case of Bislama – examining the language's split pro-drop system, as well as evidence for its use of argumental null subjects in addition to null expletives. Finally, in Section 3.3, I will summarize the ways in which null subjects have been analyzed in Haitian Creole, and subsequently in Cape Verdean Creole, as well as what these analyses conclude about the languages' pro-drop statuses. This discussion, in addition to shedding light on the intricacies of the matter, will also provide a theoretical foundation for Chapters 4 and 5, in which I will provide evidence for, and an analysis of, the pro-drop phenomena found in Cape Verdean Creole.

3.1   Non-Argumental Null Subjects in Creole Languages

Non-argumental null subjects are observable in an array of creoles around the world, and comprise the most common type of pro-drop phenomenon observed across creole languages. In this section, I will look specifically at general null expletives[1], null expletives used in weather predicates, impersonal null subjects, and null expletive subjects used in raising constructions. From the data, we will see that use of non-referential null subjects is prevalent amongst creoles.

3.1.1   General Null Expletives

I will begin by looking at the use of general null expletives in creole languages. This construction is quite common, being found in every creole language I will cover in this section. To start the list, Philippine Creole Spanish, also known as Chabacano, exhibits general null expletives:

(27) a. *tiene best a lyigá kasa di Yoni*
        "There are times when [I] go to Yoni's house."

    b. *noay pa hente na mundo*
        "There were not yet people in the world."
        (Lipski 1999: 2 (1))[2]

Mauritian Creole also allows general expletives to be null:

(28) a. *possib   Pyer   lakaz*
        possible Peter house
        "It's possible Peter's at home."
        (Syea 1993: 92 (5))

    b. *ena en voler dã lakaz*
        be a thief in house
        "There's a thief in the house."
        (Syea 1993: 92 (6))

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[1] For the purposes of this paper, I will use the term *general expletive* to refer to dummy subjects corresponding to English '*it*' or '*there*'.

[2] The original publication (Lipski 1999) does not provide glosses for the Philippine Creole Spanish data.

Bislama, an English-based creole spoken in Vanuatu, exhibits null expletive subjects as well:

(29)   *Yes, Ø i   gat sam   tu*
        yes Ø AGR have some too
        "Yes, there are some [here] too."
        (Meyerhoff 2000: 128 (6.10))

Kriyol, a Portuguese-based creole language spoken in Guinea-Bissau, also allows general

expletives to be null:

(30)   *Tene tew   bon*
        Have uncle good
        "It's good to have an uncle"
        (Nicolis 2005: 43 (13))

Null expletives have also been attested in Berbice Dutch Creole:

(31) a. *Da hirisɛk   draitə   potmã*
        BE here=FOC=1SG turn-PF old=man
        "It is here I got old."
        (Kouwenberg 1994: 179 (114))

    b. *O   bi masi mɛnlɛ dunggrə*
        3SG say must middle night
        "He said (it) must have been midnight."
        (Kouwenberg 1994: 179 (115))

    c. *Ha   en kən:au   ka*
        Have one person=now NEG
        "There is nobody now."
        (Kouwenberg 1994: 180 (116))

Saramaccan, a creole language with both Portuguese and Spanish superstrates that is spoken in

central Suriname, allows expletive null subjects as well (sometimes obligatorily, as in the

example below):

(32)   *(*A) tuu   tàa di wòmi gò disà déé fämii   feen*
         It   true that the man   go leave the the(pl) family of him
        "It is true that the man left his family."
        (Nicolis 2005: 53 (36))

Papiamentu, a creole language spoken in the Caribbean with a combination of Dutch,

Portuguese, and Spanish influences (Kouwenberg and Murray 1994), also shows these general

expletive null subjects:

(33)　　*tin / tawatin　hop　hende*
　　　　have　PAST-have many person
　　　　"There are/were many people."
　　　　(Nicolis 2005: 63 (55))

Jamaican Creole appears to exhibit general null expletives as well[3].　In the following example, *A*

is analyzed by Durrleman-Tame (2008) as an equative copula, thus necessitating a null pro

expletive in [Spec,IP] to satisfy the EPP:

(34)　　*A　　　　　　　di moni　Piita tiif*
　　　　Ø　EQUATIVE COPULA　the money Peter stole
　　　　"It is the money that Peter stole."
　　　　(Durrleman-Tame 2008: 106 (168))

French-based Haitian Creole shows optionally null expletive subjects:

(35)　　*gen jwèt sou tab　la*
　　　　have toys on　table the
　　　　"There are toys on the table."
　　　　(DeGraff 1993: 72 (3))

Finally, Cape Verdean Creole also exhibits these general null expletives:

(36)　　*ten　dos omi　kis　ben odja-bu uji*
　　　　have two man　COMP　come see-you today
　　　　"There are two men who came to see you today"
　　　　(Marlyse Baptista, Personal Communication)

From this data, we can see that general expletive null subjects are found frequently in a diverse

group of creole languages, and that null expletives constitute a common type of pro-drop

symptom observed in creoles.

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[3] Durrleman-Tame (2008: 107) observes that Jamaican Creole also appears to avoid overt non-referential subjects in other instances by doing away with the expletive construction altogether. For example, weather predicates in Jamaican Creole require full DPs as subjects: *Rain a fall* / Rain PROG fall / "It is Raining".

3.1.2   <u>Weather Predicates</u>

Null expletives used in weather predicates make up another common occurrence of null

subjects in creole languages.   Almost every creole that exhibits general null expletives exhibits

null expletive subjects in weather predicates as well.

For example, Philippine Creole Spanish shows null expletives in this weather

construction:

(37)   *estaba ya gayot ta kay ulan duro druo*
        "Rain was [already] falling very hard."
        (Lipski 1999: 2 (1))

Mauritian Creole also has expletive null subjects in weather predicates:

(38)   *ti   fer   fre   yer*
        TNS make cold yesterday
        "It was cold yesterday."
        (Adone 1994: 114 (2))

Null subjects with weather verbs have been attested in Bislama as well:

(39)   *Ø i   kol Ø i   gat   tri   nyusilan   ami, oli   sik, oli   gobak*
        Ø AGR cold Ø AGR have three New.Zealand army AGR sick AGR return
        "It was cold, [and] there were three New Zealand army [guys] who got sick and
        had to go back [to camp]."
        (Meyerhoff 2000: 119 (6.5))

Saramaccan allows null expletives with weather predicative adjectives:

(40)   *(A) (bi-) kéndi*
        (it) TNS hot
        "It is/(was) hot."
        (Nicolis 2005: 52 (35))

Papiamentu also shows null subjects with weather verbs:

(41)   *tawata jobe*
        PAST rain
        "It was raining"
        (Nicolis 2005: 63 (56))

Haitian Creole exhibits optionally null subjects in weather predicates:

(42) *te fè frèt*
ANT make cold
"It was cold."
((DeGraff 1993: 72 (2))

Finally, Cape Verdean Creole exhibits obligatorily null expletives in weather predicates:

(43) a. *Sta faze kalor oji*
is make heat today
'It's hot today.'
(Baptista 2002: 254 (107))

b. *Sata txobe na Lisboa*
PROG rain in Lisbon
"It's raining in Lisbon."
(Costa and Pratas 2012: 9 (18))

Thus, weather predicates comprise another common construction in which creole languages exhibit expletive null subjects.

3.1.3   Impersonal Null Subjects

Some creole languages also exhibit the use of impersonal null subjects.   Here, I will refer to *impersonal subjects* as subjects corresponding to one of the three subtypes of impersonals outlined by Sigurðsson (2009): 1) *generic*: corresponding to English '*you*' or '*one*', or people in general; 2) *arbitrary*: corresponding to English '*they*', excluding the speaker/hearer; and 3) *specific*: "referring to a wholly or partly specific set of individuals, most commonly including the speaker" (Sigurðsson 2009: 4).

Philippine Creole Spanish, for instance, shows null subjects in a variety of impersonal constructions, as we can see in (44). These impersonal null pronouns freely alternate with the overt third person plural pronoun *silà*. Lipski (1999: 7) speculates that the use of pro_{arb} in place of the overt third person plural pronoun "may represent a more abstract, detached perspective."

(44) a. *nuay ustedes cosa que apagá, abla silá libre*
  "You don't have to pay anything; they say that [it is] free."

  b. *si abla kamé el verdat, ay mata kanamon*
  "If we (excl.) tell the truth, [*pro*arb] will kill us."

  c. *ta manda kortá kon ese palay, ta asé kamaring grande, alyá ta junta palay…*
  "[*pro*arb] has the rice cut, [*pro*arb] makes big piles, [*pro*arb] gathers the rice up there"
  (Lipski 1999: 6-7 (4))

Mauritian Creole also exhibits null subjects in generic impersonal constructions:

(45) a. *lôtâ, Ø ti degrad karo ar pios*
  "Long ago, [people] cleared canefields with a pickaxe."
  (Lipski 1999: 12 (9))

  b. *Ø van puasõ dã bazar*
    sell fish   in market
  "People/one sell(s) fish in the market."
  (Syea 1993: 92 (2a))

Papiamentu allows impersonal null subjects, although it has been observed that the occurrence of

these null subjects is more restricted in the variety of Papiamentu spoken in Aruba than in that of

Curaçao:

(46) a. *ta bende flor*
  PRES sell flower
  Aruba: "Flowers for sale." / Curaçao: "Flowers are being sold."
  (Nicolis 2005: 63 (57a))

  b. *ta (wata) toka bon musika*
  PRES/PAST play good music
  Aruba: * / Curaçao: "Good music is/was being played."
  (Nicolis 2005: 64 (58))

Cape Verdean Creole shows null subjects in impersonal contexts as well:

(47) a. *Ta txomado so di noti*
  TMA called   only of night
  "We were called only at night."
  (Baptista 2002: 255 (110))

b. *Li   pode fumadu*
   LOC may   smoke.PASS
   "People may smoke here."
   (Costa and Pratas 2012: 10 (19))

Impersonal constructions thus represent another context in which creole languages express pro-

drop phenomena.

3.1.4   Raising Constructions

Raising constructions with *seem*-type verbs present an additional context in which

expletive null subjects are used in creole languages. In Bislama, for example, null subject

expletives occur with raising verbs:

(48)   *Ø   i   luk olsem Ø   i   stap jam   nomo*
       Ø   AGR look COMP Ø   AGR HABIT jump only
       "It's like he just jumps."
       (Meyerhoff 2000: 119 (6.6))

Kriyol allows both null and overt expletives in this construction:

(49) a. *I parsi n   kuma kil fulanu   ka   ta obi   Kriyol*
        It seems me KUMA that so-and-so NEG A understand Kriyol

     b. *Ø Parsi n   kuma   kil fulanu   ka   ta obi   Kriyol*
        Ø seems me KUMA that so-and-so NEG A understand Kriyol
        "It seems to me that this guy doesn't understand Kriyol."
        (Nicolis 2005: 43 (11))

Null expletives are obligatory with raising verbs in Papiamentu:

(50) a. *Ø (tawata) parse ku   Maria ta(wata) malo*
        Ø (PAST)   seem COMP maria be(PAST) ill
        "It seems/seemed that Mary is/was ill."
        (Nicolis 2005: 62 (54))

Jamaican Creole allows optionally null expletives in raising constructions:

(51) *(I)* *komiin kile seh di pickney a go run weh*
(EXPL) seem like seh the child PROG PROSP run away
"It seems like the child is going to run away."
(Nicolis 2005: 65 (62))

Haitian Creole also shows evidence of null expletives with *seem*:

(52) *genlè Jak damou*
seem Jak in-love
'It seems that Jak is in love.'
(DeGraff 1993: 71 (1))

A similar phenomenon is observed in Cape Verdean Creole, where expletives are obligatory null

in raising predicates (and other environments):

(53) *Ma gosi n'es tempu, parse ki ta nase mas*
but now in this time seem COMP TMA be born more
"But it would seem that in these times, more are being born."
(Baptista 2002: 254 (109))

The use of null expletive subjects with *seem*-type verbs in raising constructions is a wide-spread

phenomenon in creole languages.

3.1.5 Conclusion

As we have observed from the data in the preceding sections, non-argumental

(expletives) null subjects are quite common in creole languages. Expletive subjects in a variety

of contexts are allowed to be optionally null (as observed in Kriyol, Jamaican Creole, and

Haitian Creole), and sometimes, may even be obligatorily null in a given creole (as observed in

Saramaccan, Papiamentu, and Cape Verdean Creole). Thus, despite manifesting poorly inflected

morphological systems, creole languages also manifest symptoms of pro-drop. In the following

sections, I will provide a closer examination of a few of the creoles for which I have already

provided expletive null subject data. As we will see, some creoles show evidence of pro-drop phenomena involving argumental subjects in a variety of environments.

3.2   Split Pro-drop: The Case of Bislama

Bislama presents an interesting case to consider with respect to our pro-drop typology, and our investigation of pro-drop symptoms across creole languages, given its "split" pro-drop system, in which first and second person pronouns show one preference for pro-drop and third person pronouns show another. We have seen in the previous sections that Bislama instantiates a variety of non-argumental null subjects in different contexts, including general null expletives, null expletives in weather predicates, and null expletives subjects in raising constructions. Additionally, in Meyerhoff's (2000) investigation of null subjects in Bislama, she provides evidence for argumental null pronominal subjects. Interestingly, she also finds that Bislama shows a strong preference for third person subjects being realized as phonetically null, while first and second person subjects are preferably realized as overt pronouns. In the following sentences, for example, we can observe that Bislama allows null third person pronouns, both singular and plural[4]:

> (54) a. *Ø i   ron Ø i   go long haos*
>   Ø AGR run Ø AGR go PREP house
>   "She ran home."
>   (Meyerhoff 2000: 128 (6.9))

---

[4] Meyerhoff (2000:108) outlines the following subject-verb agreement paradigm in Bislama: 1SG, 2SG and 1PL(INCL) subjects have no agreement marker, *oli* is the agreement marker for 3PL subjects, and *i* is the agreement marker elsewhere. Thus in (54), *i* is a third person singular agreement marker, and in (55) *oli* is a third person plural agreement marker.

b. *Hem i   stap sore long mi*
   3SG   AGR CONT sorry PREP 1SG

   from   we   Ø i   harem we   mi toktok we   difren
   because COMP Ø AGR hear   COMP 1SG talk   COMP different
   "She was feeling sorry for me, because she heard that my voice was all funny."
   (Meyerhoff 2000: 120 (6.8c))

(55) a. *Ø oli   fraet from   Ø i   kolol tumas*
     Ø AGR fright because Ø AGR cold very
     "They were scared because it was too cold."
     (Meyerhoff 2000: 128 (6.11))

   b. *Taem we   mifala i   givim siks handred tausen   Ø oli   karem Ø i   go*
      time COMP 1PL   AGR give   six hundred thousand Ø AGR carry Ø AGR go
      "When we gave [them] 6000,000 [vatu], [they] took [it] away."
      (Meyerhoff 2000: 120 (6.8b))

In her analysis of null subject usage, Meyerhoff finds that the person and number of the subject

referent have the largest effect on the variation in the corpus of all the observed speakers. While

third person subjects strongly favor null pronouns, first and second person subjects strongly

favor overt ones. The table in which Meyerhoff summarizes her findings is reported below:

Table 3.1   Goldvarb weightings for all speakers for person and number of subject referent
          (0 = pronoun subject; 1= phonetically null subject)

Person and number of subject referent	Goldvarb weighting	N clauses
3SG	0.709	1,719
3PL	0.869	846
1SG	0.147	1,054
1PL	0.268	375
2SG	0.206	397
2PL	0.197	71

(Meyerhoff 2000: 135 (Table 6.4))

Meyerhoff argues that Bislama is an example of a *split pro-drop system*, in which pro-

drop rules for first and second person pattern in one way, and rules for third person in another.

Such a split has in fact also been argued for languages such as Finnish and Hebrew (Vainikka

and Levy 1995), although interestingly, in the opposite direction. In Table 3.2, we see that

Bislama shows a preference for first and second person pronouns to be overt and third person

pronouns to be null. Finnish and Hebrew, on the other hand, show a preference for null first and second person pronouns, and overt third person ones:

Table 3.2   Preferences for null subjects in different persons for split pro-drop systems:

	Bislama	Finnish/Hebrew
1st	pronoun	null subject
2nd	pronoun	null subject
3rd	null subject	pronoun

(Meyerhoff 2000: 136 (Table 6.5))

She contends that this split in Bislama is due to the morphological transparency of the third person singular and plural agreement morphology. The agreement markers *i* and *oli* are derived from English *he* and *all*; a fact that provides evidence for the 3SG and 3PL agreement on verbs in Bislama as being "maximally referential." This transparency, she says, accounts for the split in null subject preference (Meyerhoff 2000: 137). Bislama's split system, and its exhibition of null pronominal subjects, thus adds yet another dimension of diversity to the typology of null subject usage across creole languages and the ways in which creoles express pro-drop phenomena.

3.3   Haitian and Cape Verdean Creole: Analysis and Debate

In Chapter 4, we will provide evidence for the wide range of pro-drop phenomena that Cape Verdean Creole (CVC) displays, focusing specifically on its use of null pronominals and the occurrence of these null argumental subjects in root contexts. However, it is important to first examine the contrasting pro-drop analyses that have been proposed for the language, which have led to opposing conclusions about its pro-drop status. The arguments put forward to analyze null subject phenomena in CVC stem largely from the analyses proposed for Haitian

Creole (HC), and thus I will briefly summarize the substance of that debate before moving into the CVC analyses.

3.3.1   Pro-Drop Analyses in Haitian Creole

We have seen evidence that HC expresses several symptoms of pro-drop through its use of general null expletives (35), null expletives in weather predicates (42), and null expletives in *seem*-type raising constructions (52).   These pro-drop symptoms, however, have been analyzed from two diverging viewpoints that differ crucially in their analysis of Haitian subject pronouns. DeGraff (1993) views subject pronouns as syntactic clitics generated in INFL that license and identify *pro,* whereas Déprez (1994) views them as full pronouns located in argument positions which may occur as phonological, but not syntactic, clitics. Their analyses lead to radically different conclusions about the pro-drop status of HC, with the former analysis concluding that HC is indeed a pro-drop language, while the latter concludes that it is not.

DeGraff (1993) argues that while HC requires referential subjects to be phonologically overt, these subject pronouns do not actually appear in subject position, but rather, they are clitics that phonologically spell out the agreement features of INFL (DeGraff 1993: 73). He suggests that subject pronouns are bound phonologically to the initial morpheme of the verb phrase, and that they are structurally adjacent to the verb phrase (i.e. in INFL) in the syntax (DeGraff 1993: 74). Thus, 'subject' pronouns in HC are actually clitics that spell out the inflection phrase's agreement features and identify *pro*. DeGraff's analysis is that verbs in HC, like in all creoles, never use morphological inflection as a means through which to realize AGR. Rather, AGR in HC is realized phonologically as a clitic pronoun (DeGraff 1993: 76).   This is how HC, which lacks the recovery mechanism of rich morphological agreement affixation found

in consistent null subject languages, is able to "add" the θ-features of the subject to INFL (DeGraff 1993: 78).

Déprez (1994) argues against DeGraff's (1993) pro-drop analysis of Haitian Creole, specifically contradicting his view that subject pronouns in HC should be analyzed as syntactic clitics. She argues instead that subject pronouns should be analyzed as phonological clitics. Under Déprez's analysis, the pronominals in HC are syntactic pronouns that are located in argumental positions, which are then able to cliticize at PF. Such an analysis gives the alternative structure in (57), rather than the structure proposed by DeGraff in (56):

(56)   [pro [$_{INFL'}$ li [$_{VP}$ vini]]]   DeGraff

(57)   [$_{IP}$ li [$_{INFL'}$ Infl [$_{VP}$ vini]]]   Déprez
        (Déprez 1994: 1 (2,3))

Under Déprez's analysis, therefore, pronominal subjects in HC are full pronouns occurring in argument positions, and consequently, HC is not a pro-drop language.

3.3.2   Pro-Drop Analyses in Cape Verdean Creole

Null Subjects in Cape Verdean Creole (CVC) are the subject of a similar debate as those in Haitian Creole. In line with the proposal of DeGraff (1993), Baptista (2002) analyzes CVC as a pro-drop language whose subject clitics constitute 'the spelling out of AGR.' Costa and Pratas (2012) argue that CVC is not pro-drop, viewing the licensing and identification of *pro* in CVC as being decidedly different from other pro-drop languages.

Following DeGraff's (1993) proposal, Baptista (2002) argues that CVC should also be analyzed as a pro-drop language despite exhibiting overt pronominals. She argues that CVC, like HC, has subject clitics in AGR and that these clitic pronominals constitute 'the spelling out of AGR' (Baptista 2002: 253). She proposes that their nonclitic counterpart generally appears in

SpecAgrP or in a higher position on the tree, and that subject clitics occur as heads in AGR (meaning that they are syntactic, not phonological, clitics). When nonclitics are not present, the subject clitics in AGR then spell out the features of agreement (Baptista 2002: 257). Baptista thus proposes the structure in (59) to represent (58)

(58)   ***Mi***   *N*   *odja bonberu*
            NONCL   CL   see exterminator
            'I saw the exterminator.'

(59)

```
                AgrSP
               /     \
            Spec      Agr'
             |       /    \
            Mi     Agr     VP
                    |     /   \
                    N   Spec   V'
                             /    \
                            V      NP
                            |      /\
                          odja   bonberu
```
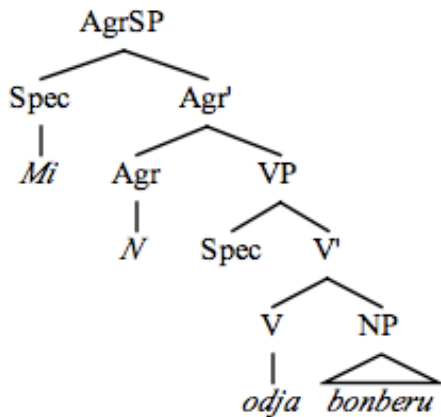
(Baptista 2002: 257-58 (121-22))

In summary, Baptista argues that CVC is a pro-drop language in the same way as Haitian Creole under DeGraff's (1993) analysis, under which subject clitics in CVC occur in AGR and "spell out" the features of agreement.

Costa and Pratas (2012) argue against this analysis and propose instead that CVC is a partial, or non-consistent, null subject language, but that it is *not* pro-drop. Their analysis suggests that *pro* is only available in CVC as a bound variable, which would differentiate it from consistent pro-drop languages such as Italian or Spanish (Costa and Pratas 2012: 18). Costa and Pratas argue that because CVC only allows null subjects non-consistently, and because its licensing mechanism differs from consistent pro-drop languages, it cannot be analyzed as a pro-

drop language.   While they acknowledge that null subjects occur in indefinite and root expletive contexts, and that *pro* itself is indeed available in CVC, they argue that its availability is strictly limited to embedded contexts in which it is bound by an operator. They thus propose that *pro* is a bound variable that is only available when it is identified by a matrix quantified- or *wh*-antecedent (Costa and Pratas 2012: 17). This differs from consistent pro-drop languages, in which the featural make-up of T is responsible for licensing *pro*.   Under their analysis, the availability of *pro* is therefore not the only factor to consider in deciding upon the pro-drop status of a language. Instead, they argue that "the combination of its availability and its licensing and identification mechanisms" needs to be considered (Costa and Pratas 2012: 18).

In Chapter 4, I bring further support to Baptista's (2002) argument, and based on Baptista and Bayer (in preparation), provide evidence that CVC displays an even wider range of pro-drop options beyond what Costa and Pratas had observed. In addition to showing evidence of null pronouns in CVC, we will show that CVC also exhibits these argumental null subjects in root contexts. We will argue that this evidence supports the initial conclusions drawn by Baptista (2002) regarding the wide range of pro-drop symptoms CVC displays with both its argumental and non-argumental pronouns, akin to those found in pro-drop languages. As we will use third factor principles rather than a pro-drop parametric perspective on the issue, we will not need to argue for or against the pro-drop status of the language but instead demonstrate the principles and mechanisms that identify null subjects in both embedded and root clauses. The occurrence of null subjects in root clauses has not been acknowledged nor investigated before in the literature on this topic.

3.4   Conclusion

We have seen that creole languages show a great deal of variety and diversity in their use of null subjects, despite the fact that they also characteristically lack rich inflectional agreement. The following table summarizes the range of pro-drop phenomena found in the array of creole languages that I have discussed in this chapter. The (+) sign signals the presence of that feature in the creole language, the (-) sign signals that it is absent, and the question mark signals that the construction was not mentioned in the literature I consulted. Please, note that this does not mean that that particular construction is not attested in the language:

Table 3.3   Pro-Drop Phenomena in Creole Languages

	General Expletive	Weather Expletive	Impersonal	Expletive Raising	Split System	Argumental
Philippine Creole Spanish	+	+	+	?	-	-
Mauritian Creole	+	+	+	?	-	-
Bislama	+	+	?	+	+	+
Kriyol	+	-	?	+	-	-
Berbice Dutch Creole	+	?	-	-	-	-
Saramaccan	+	+	?	-	-	-
Papiamentu	+	+	+	+	-	-
Jamaican Creole	+	-	?	+	-	-
Haitian Creole	+	+	?	+	-	-
Cape Verdean Creole	+	+	+	+	-	+

In the next chapter, I will supplement this survey of pro-drop phenomena in creole languages with a case study of null subject usage in Cape Verdean Creole. Using a large corpus collected by Baptista over the course of three field trips to the Cape Verde islands, I investigate in what environments pro-drop constructions are possible in this language.

CHAPTER 4: CASE STUDY OF CAPE VERDEAN CREOLE

In the previous chapter, we saw the diversity and variety that creole languages show with respect to their use of null subjects. Here, I will turn our attention to a case study of Cape Verdean Creole. I will provide primary corpus data collected by Baptista over several years, which shows that CVC instantiates a wide range of pro-drop phenomena despite completely lacking the rich agreement patterns found in other natural languages. Furthermore, this data shows that CVC exhibits a wider range of pro-drop phenomena than even the best-studied creole cases, such as Bislama (as discussed in Section 3.2). This chapter will be split into two parts. In Section 4.1, I will provide the empirical data from the CVC corpus to demonstrate the range of null subjects, both argumental and non-argumental, which are possible in the language. Following this, in Section 4.2, I will examine the location of these null subject occurrences – drawing special attention to instances of long-distance, or even non-recoverable, antecedents and null pronominals in root clauses.

4.1 Range of Null Subjects in Cape Verdean Creole

In this section, I will introduce the full range of pro-drop data from CVC. I will present a typology of the cases in which argumental subjects can be dropped, in addition to a typology of non-argumental null subjects. While I will examine both arguments and non-arguments, what is of primary concern to us is the fact that null argumental subjects in CVC display the possibility

of dropping, and that there are subsets among null argumentals just as there are among non-

argumentals.

Null Argumental Subjects

The primary data from the corpus shows that CVC exhibits a range of null argumental

pronominals, as illustrated in the table below[5]:

Table 4.1   Typology of Null Argumental Subjects in CVC

Type	Example
1st Person Singular	*E ba…, dja N skese tanbê. E ba…, Ø skese tanbê, Ø ta skese txeu* he left comp I forget as well he left Ø forget as well Ø ASP forget a lot 'He left, I forget as well. He left, (I) forget as well, (I) forget a lot."
2nd Person Singular	*…bu pode baba Somada faze konpra. Ø Ki ta baba propi.* you can go+ANT Somada do shopping Ø COMP ASP go+ANT really *Ø Ba faze konpra bu ben ku bu balai di konpra* Ø go do shopping you come with your basket of grocery 'You used to be able to go Assomada to do grocery shopping. (You) would go really. (You) would go do the grocery shopping, you come back with your basket of groceries."
3rd Person Singular	*mininu observa-l, Ø odja se ka sa ta odja-l* child observed-him Ø saw if NEG PROG see-him 'The child observed him, (he) made sure he was not looking at him.'
3rd Person Plural	*minis, na ta bai, len… Ø odja xapéu, Ø panha* children ASP ASP go, side Ø saw hat Ø took 'Children were going, on the side (they) saw the hat, (they) took it.'

As we can see, there are four distinct subsets of null argumental subjects in CVC: 1st Person

Singular, 2nd Person Singular, 3rd Person Singular, and 3rd Person Plural. While the 3rd Person

arguments were much more frequently dropped, it is nonetheless significant that 1st and 2nd

Person arguments show the distinct possibility of dropping as well. Taken together, the range of

null argumental pronominals instantiated by CVC is quite remarkable given that they are

accompanied by no inflectional morphology whatsoever. In Section 4.2, I will augment the data

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[5] I will use the following abbreviations in the CVC glosses:
ANT   anterior   COMP complementizer   NEG   negative
ASP   aspectual   comp   completive   PROG   progressive

provided here with a number of examples that show the range of environments in which these null pronominals are possible.

Null Non-Argumental Subjects

CVC also shows a variety of non-argumental null subjects, as was discussed in Chapter 3. In the corpus data, there were four types of such non-argumentals, as shown in the following table:

Table 4.2   Typology of Null Non-Argumental Subjects in CVC

Type	Example
Expletive	*Ø Ka era só fomi, tanbê karastia.* Ø NEG was only hunger as well lacking things '(It) was not just hunger, it was also about lacking everything.'
Existential	*Ø staba un k' inda ka xeiaba.* Ø was one that yet NEG fill up+ANT '(There) was one that was not yet filled up.'
Impersonal	*Ø ka debe roba* Ø NEG must steal '(One) must not steal.'
Impersonal Passive	*Ø Ta dada! Ø Ta dada midju, sapatinha* Ø ASP give+PASTPASSIVE Ø ASP give+PASTPASSIVE corn bean "We were given! We were given corn and beans."

As illustrated above, the corpus shows examples of null expletive and existential subjects, as well as impersonals and impersonal passives. As we have seen in the survey of null subjects in creole languages presented in Chapter 3, non-argumental subjects like these are commonly found in a variety of creoles despite their lack of rich inflection. Cape Verdean Creole is no exception, with such non-argumental null subjects appearing frequently in the primary data.

4.2   Null Arguments: Location and Distance

Not only does CVC show a range of argumental pronominals with the ability to be dropped, but it also shows a range of locations in which these dropped pronominals may occur. In this section, I will describe where null argumentals are found in the corpus data; paying attention to the distance of their antecedents and in what type of clause they are located.

First Person Singular

There were several instances of first person singular null pronominals in the data. Despite being relatively scarce compared to the more frequent third person null pronominals, which I will discuss later, they still occurred in a variety of different locations relative to their antecedents. One instance showed a short-distance antecedent earlier in the sentence:

> (60)   *Ala ki* [**N**]$_i$ *ka sa lenbra mutu bem… e nkontra un sukuru ka ta txiga…*
> ***pro***$_i$ *ka sa persebe mutu ben, filmi staba un bokadinhu fusku, tenpu sta un bokadinhu klaru dimás.*
> 'It is at that point that [**I**]$_i$ no longer remember very well… he met the dark does not help… ***pro***$_i$ am not understanding very well, the movie was a bit too dark, the weather was a bit too bright.'

A somewhat more-removed antecedent can be observed in a second instance, where it occurs in the sentence prior to the dropped arguments:

> (61)   *Ah!... pa ta fruta, ahn… N odja. N odja tanbê. E ba…, dja* [**N**]$_i$ *skese tanbê. E ba…,* ***pro***$_i$ *skese tanbê,* ***pro***$_i$ *ta skese txeu!*
> 'Ah! To remove the fruit, ahn… I see. I saw too. He went… [**I**]$_i$ have forgotten. He went… ***pro***$_i$ forget as well, ***pro***$_i$ forget a lot!'

Other instances of dropped first person singular subjects were long-distance. In the passage below, for example, both null pronominals share an antecedent that occurs a number of sentences higher in the speech:

> (62)   *Kuzé ki mi* [**N**]$_i$ *ta fazeba? Riason spontânia. Ipótze? …ipótze… Ken ki da nhos…? Ken ki da nhos kel fruta la? Pamo ki nhos ta kume? Undi ki staba k'es*

*sestu ki staba lisin? Kel-li e un di kes… Ker dizer, **pro**_i tenta kestiona-s pa odja,
O, nton na pior di ipótze, **pro**_i bai pa riba d'es ku purada…*
'What would [**I**]_i do? Spontaneous reaction. For instance? … instance… Who
gave to you? Who gave those fruits to you? Why are you eating? Where were
these baskets that were right here? This is one of them… meaning, **pro**_i would try
to question them to see, or, in the worst case scenario, **pro**_i would beat them up.'

As we can see, these null pronominals are by no means limited to occurring in just the adjacent

clause. It is notable that despite their relatively infrequent appearance in the corpus data, the first

person singular null pronominals still display the possibility of dropping even when the

antecedent precedes them by several sentences.

Second Person Singular

Although rare, second person singular pronouns also showed the possibility of being

dropped. In the following passage, the speaker uses a null pronominal referring back to the overt

second person pronoun twice in a row: once in the sentence following the antecedent, and once

in a root clause that is located two sentences away from the antecedent:

(63)   *E bo, un sumana di trabadju, nu ta pagada dozi merés, man tanbê, kel dozi merés,
[**bu**]_i pode baba Somada faze konpra. Ki **pro**_i ta baba propi. **pro**_i Ba faze konpra
bu ben ku bu balai di konpra, purkê, tudu kuza e baratu.*
'And you, a week of work, we were paid twelve cents, but as well with those
twelve cents [**you**]_i could go to Assomada to do grocery shopping. That **pro**_i
would go really. **pro**_i would go and do the grocery shopping you come back with
your basket of groceries, because everything is cheap.'

The location of this second null pronominal in both a relatively long-distance position from its

antecedent and a root clause is worth noting. As was discussed in Section 3.3.2, the ability for

null pronominals to occur in root clauses has been the subject of debate in competing analyses

over CVC's pro-drop status. Here, we can see that it is indeed possible. In the following

sections, we will see that the environments in which third person null pronominals were found

provide even more evidence to substantiate this claim.

Third person singular null pronominals were the most abundant in the data, showing several instances of occurrences in root clauses, as well as an instance where there was no overt recoverable antecedent. To give a sense of the range, I will provide examples of short- and mid-distance antecedents, as well as the non-recoverable antecedent. I will also provide examples of these null pronominals occurring in root clauses, data that is especially significant when considering the breadth of CVC's null subject phenomena as a whole.

About half of the dropped pronouns had antecedents in the same sentence, such as in the following instance, in which there is a succession of dropped arguments referring back to *pirata*:

(64)   *E un pirata, el e fetu di un* [*pirata*]$_i$ *ta kontra ku algen, **pro**$_i$ ta kusa, **pro**$_i$ ta rabata, **pro**$_i$ ta poi pé na txon, **pro**$_i$ ta kore.*
'He is a pirate, he is made of a [**pirate**]$_i$, who meets people, ***pro**$_i$ would grab, ***pro**$_i$ would snatch, ***pro**$_i$ would put their feet on the ground, ***pro**$_i$ would run.'

Another similarly short-distance location can be observed below:

(65)   *E po na bisikleta rabida, es tonda panha,* [*omi*]$_i$ *ben, **pro**$_i$ ben tomale-i es ben bai.*
'He put the bicycle right side up, they took again, [**the man**]$_i$ came, ***pro**$_i$ came to take it and they took off."

Null third person singular arguments also appeared in environments in which their antecedents were located in the previous sentence, such as in the following examples:

(66)   *Nha avó, d'orgons. Nha avó matxu,* [*nha avó*]$_i$ *matxu e d' Njenhu. **pro**$_i$ Sufri sin! **pro**$_i$ Sufriba. Mas* [*nha avó*]$_i$ *era, e…, kuza… e tinha orta. **pro**$_i$ Era propetadu, propretaru, **pro**$_i$ tin aorta, tudu…, txon… **pro**$_i$ Ka ta sufriba fomi, **pro**$_i$ ka ta sufriba…*
'My grandmother from Orgons. My grandfather, [**my grandfather**]$_i$ is from Njenhu. ***pro**$_i$ suffered for sure! ***pro**$_i$ had suffered. But [**my grandfather**]$_i$ was, he… thing… he had an orchard. ***pro**$_i$ was a landowner, landowner, ***pro**$_i$ had an orchard, all… land… ***pro**$_i$ did not suffer from hunger, ***pro**$_i$ had not suffered.'

Note that not only do these instances of *pro* have antecedents in the preceding sentences, but also that several of them occur in root clauses. Another instance of a null third person singular pronominal in a root clause can be observed below:

(67) *Dispos, bai* [***un viuva***]ᵢ*. **pro**ᵢ Pidi-l zimola.*
      'Afterwards, [**a widow**]ᵢ went. **pro**ᵢ asked for charity.'

Finally, there was one instance in the data in which a third person singular null pronominal had no recoverable antecedent whatsoever. In the passage below, there are two different types of dropped arguments: third person plural (which I will discuss in the following section) and third person singular (in this case, "it"). It is this second null argument that is of importance here. The dropped third person singular pronominal (*pro*ⱼ) refers to "hunger." However, this is only recoverable from the context of the discourse, since no overt antecedent for *pro*ⱼ is ever mentioned by the speaker:

(68) *Só di siti ki **pro**ᵢ ta ben. **pro**ᵢ Ta bada Praia,* [***gentis***]ᵢ *ki tinha buru ta bada Praia pa buska… mas e ku senha, kel padás di papel skrebedu… tantus família…! Kel-li, inda propi, nen **pro**ⱼ ka mutu dura.*
      'Only by seven **pro**ᵢ would come. **pro**ᵢ would to go Praia, [**the people**]ᵢ who had donkeys would go to Praia to look for… but it was with a signature, that piece of written paper… so many families…! Fortunately **pro**ⱼ did not last too long.'

This is clearly worthy of attention given that the argument can still be dropped despite the fact that the referent is not recoverable. Overall, the third person singular null pronominals found in the corpus were both common and able to occur in a diverse range of environments, including root clauses.

Third Person Plural

Interestingly, null third person plural pronouns were nearly as common in the data as third person singulars. Like their singular counterparts, they too appeared in a range of locations,

including root clauses. As with the third person singular pronouns, I will provide examples of

their occurrences in several different environments to give a sense of the variety observed in

their possible locations.

The majority of the dropped third person plural arguments occurred in the same sentence

as their antecedents, such as in the following instance:

(69)   ...*N odja só* [***gentis***]ᵢ *ta trapasa kunpanheru si,* ***proᵢ*** *ta kore si, lus… más nada N
        ka odja.*
        'I saw only [**people**]ᵢ trampling each other yes, ***proᵢ*** run yes, light… I didn't see
        anything else.'

Third person plural null arguments were also found in locations where the antecedent was in the

previous sentence, as illustrated in the sentences below:

(70)   [***Mundu***]ᵢ *ta binha ki nhu ka konxe. Di zonas di lonji,* ***proᵢ*** *ta binha.*
        '[**People**]ᵢ would come that you didn't know. From a long way ***proᵢ*** would come.'

Null third person plural pronominals also showed the possibility of appearing even farther away,

as we can see in the following passage. Here, the second instance of the dropped argument

occurs two sentences away from its antecedent:

(71)   *Nton, kes* [***gentis***]ᵢ *ta more… Ta dada só gentis ki dja tinha idadi. Pa panha,* ***proᵢ***
        ta meteda dentu kau more. ***proᵢ*** *Atxadu la dja more, ti ki txon dja bira..*
        'Then, those [**people**]ᵢ would die… it was only given to people who were old. To
        take, ***proᵢ*** would be put in kau?? dead. ***proᵢ***[6] Found there already dead, until the
        ground turned…'

This instance is of particular significance in that the second dropped pronominal not only has a

long-distance antecedent, but occurs in a root clause as well.

Null third person pronominals also showed the possibility of occurring in environments

in which there is no antecedent in the vicinity, a possibility that provides clear evidence for the

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[6] *Atxadu* may interpreted in two ways: As an adjective, in which case no *pro* is involved; or as a past participle with
a null copula, in which case *pro* can be inferred.

discourse-based nature of these null pronominals. In the sentence below, the dropped argument

is referring to "the prices," which is recoverable only from the context of the discourse:

(72)   *pro*_i *Ben ta subi, **pro**_i ben ta subi dos merés, **pro**_i ben subi tres, **pro**_i ben ta subi dja, ti ki **pro**_i ba aitura.*
*'**pro**_i came to rise, **pro**_i came to rise by two cents, **pro**_i came to rise by three, **pro**_i came to rise, until, **pro**_i went way high.'*

In addition, the first *pro* in the above sentence occurs in a root clause, providing further evidence

for CVC's ability to instantiate null pronominals in root contexts. Another passage without an

antecedent in the vicinity can be observed in (73). Here, there are multiple dropped arguments,

but the null pronominal of significance is *pro*_{i,} referring to "people." The speaker uses this null

third person pronominal despite there being no nearby referent for it. As we can see, the overt

pronoun for "people" only occurs considerably earlier in the speech, on the very periphery of the

passage:

(73)   **Speaker:** [*Genti*]_i**,** *kel go **pro**_i kebe dentu simiteri. [**Nha pai**]_j go, **pro**_j kebe fora* [**simiteri**]_k, *pamo **pro**_k dja intxi,* [*baladu*]_l *intxi, **pro**_l fitxadu. La na undi txon e más aitu, la na undi ki tinha manipu, la ki abrida baladu. Nha mai baba baladu. Kel* [**nha armon**]_m *li, tanbê, **pro**_m baba baladu. Ki ka bai baladu e só nha pai, purkê el dja, el k'atxa dentu simiteri, fora simiteri. Só di morti ki tinha.*
Interviewer: …
Speaker: …*Papaia, ke li gora, N ta obi ta kontadu. Tripa di papaia, **pro**_i ta kume… banana, pendon di banana **pro**_i ta tra **pro**_i ta kume. Kel-li gó, N ka odja, mas só ki N ta obi ta kontadu. Mas **pro**_i ta kume propi, pamo ka tinha!*
"[People]_i that ***pro***_i fit inside of the cemetery. [My father]_j as for him, ***pro***_j fit outside of [the cemetery]_k because ***pro***_k was already full, [the common grave]_l filled up, ***pro***_l closed down. Over there where the ground is elevated, over there where there was some plant, that's where a common grave was open. My mother went to the common grave. This [brother]_m here, also ***pro***_m went to the common grave. The only one who didn't go to the common grave is my father, because in his case he did not find anything inside the cemetery. It was outside the cemetery. Only death there was.
…
"The papaya, as for that, I heard people say. The inside of the papaya, ***pro***_i would eat… bananas, banana peel. ***pro***_i would remove ***pro***_i would eat. This. I didn't see, but I heard people say that. But ***pro***_i would eat all the same, because there was nothing!"

The presence of dropped arguments despite there being no overt antecedent in the vicinity, or at all, is quite remarkable.   Like the third person singular null arguments, there is evidence for a wide range of possible locations for third person plural null arguments, which include, significantly, root clauses and long-distance antecedents.

4.3   Conclusion

As is evidenced by the corpus data, CVC instantiates a wide range of pro-drop phenomena despite its complete lack of inflectional morphology. Not only is it able to drop a variety of argumental, as well as non-argumental subjects, but it also allows null pronominals in root clauses and in locations in which the antecedent is not in the immediate vicinity. Given the incredibly wide range of null subjects possible in this creole language, it is clear that CVC presents a case worthy of special analytical attention. In the next chapter, we will use the data discussed here to propose an analysis of CVC's pro-drop phenomena from a Minimalist perspective.

CHAPTER 5: LICENSING ARGUMENT DROP IN CAPE VERDEAN CREOLE BY CONSIDERING THE THIRD FACTOR PRINCIPLES[7]

5.1   Introduction

As discussed in Chapter 3, the investigation of pro-drop phenomena in creole languages has been for the past two decades a fruitful area of research in creolistics leading to interesting debates regarding their pro-drop status (see DeGraff, 1993; Déprez, 1994; Meyerhoff, 2000; Baptista, 2002; Costa & Pratas, 2012; Alexandre et al., 2012; Nicolis, 2005). In some extreme cases, some creoles have been argued to fit any of the standard parametric settings depending on the analysis proposed. In the case of Cape Verdean Creole specifically, the language has been argued to be pro-drop/semi-pro-drop (Baptista, 2002), non-pro-drop (Costa and Pratas, 2012) or semi-pro-drop (Alexandre et al., 2012).

Baptista's argument for considering it a pro-drop language was that the language exhibited both null expletives and null arguments and she considered clitic pronouns, when present, as the spell out of agreement features in AGR, leaving the subject position empty. Costa and Pratas' (2012) argument in favor of the non-pro-drop status is based on the proposal that *pro* is only available in CVC as a bound variable that must be licensed and identified by a quantified or *wh*-antecedent; they highlight that this is a crucial difference from consistent pro-drop languages such as Italian or Spanish (Costa and Pratas 2012: 18) where *pro* can be presumably unbound. Finally, Alexandre et al.'s argument for a semi-pro-drop status has to do with the

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[7] This chapter provides a preliminary analysis of argument drop in Cape Verdean Creole and is part of current work to be further developed in Baptista & Bayer (in preparation).

observation that in addition to null expletives, the language also allows embedded null subjects. In the case of this particular creole, linguists have made proposals that are in stark contrast to each other.

In this section, we propose an alternative, minimalist approach to the issue reconciling the previous analyses on CVC and showing that independently from any reference to parameters, it is possible to account for the observable data by having recourse to third factor principles instead. We argue that previous analyses of CVC have erroneously taken into account *agreement* as the crucial diagnostic of pro-drop phenomena, this criterion leading to a wide range and often contradictory conclusions on the pro-drop status of this particular language.

In addition, this section will demonstrate that null arguments can also occur in root clauses in CVC, as already pointed out in Baptista (2002).

We will partially adopt Frascarelli's (2007) analysis connecting argument drop to aboutness topic shifts and Sirguðsson's (2011) account of C-edge linking that accommodates pro drop type (conditioned by agreement), topic drop type (conditioned by an empty Spec,C) and discourse drop type (not clause-internally constrained) of arguments. Crucially for our purpose, we argue that CVC is identifiable as a discourse drop type of language conditioned by an empty Spec,C.

In brief, this section offers to account for the wide range of pro-drop phenomena that CVC exhibits by offering an analysis that abstracts away from both the concepts of agreement and parameters and relies instead either on arguments as aboutness topics (Frascarelli, 2007) and on their successful C/edge linking (Sirguðsson, 2011). This new approach to the analysis of null subjects in CVC will allow us to reconcile former analyses of null subjects in CVC while

accounting for the entire set of observable data. The data under examination will focus on null

argumental subjects found in both embedded and, unexpectedly, root clauses.

The organization of this section follows the main points just presented. First, we

introduce (or briefly recapitulate) the classical null subject typology, highlighting the properties

of three types of languages, as they are discussed in the standard literature on the topic (Jaeggli

& Safir, 1989; Huang, 1984, 1989 with a focus on Sirguðsson, 2011). Second, we lay out the

full range of environments in which pro-drop takes place in CVC and third, we propose an

analysis for the unexpected distribution of null subjects in this creole language.

5.2   A brief overview of the theory of pro-drop

An early form of the pro-drop theory, articulated in Chomsky (1981), stipulated that a [-

anaphoric, +pronominal] null category (*pro*) is allowed in the subject position of a finite clause

under the condition that the Agreement features on the verb are morphologically rich enough to

enable phi-features to be recovered and interpreted (cf. Taraldsen 's generalization in Jaeggli &

Safir, 1989: 241).   This basic assumption underlies the difference between pro-drop languages

like Italian and non-pro-drop languages like English but does not account for pro-drop

phenomena in other languages like Chinese. On this topic, Huang (1984,1989) noted that in

Chinese, *pro* is available in subject position of finite clauses although AGR is absent. Let us

make it clear that by *no AGR*, we mean that no Agreement morpheme is generated under AGR,

as stipulating the absence of Agreement morphology on verbs does not equate with the absence

of AGR in the syntax. In the Chinese case, the recoverability of *pro* is dependent on the

availability of the closest antecedent. The basic observation is that there is no morphological

subject-verb Agreement in Chinese, hence no rich AGR. This led to an interesting addition to

the theory, whereby *pro* is permitted from the subject position of a finite clause only if an antecedent or a rich AGR is present. This is still consistent with the basic assumption of the standard pro-drop account based on the principle of Recoverability. This kind of empirical fact led Rizzi (1986) to refine the theory and distinguish between licensing of *pro* which is syntactic and identification of *pro* which is semantic and recoverable from previous discourse.

The Government and Binding theory of pro-drop presented the following typology for null subject languages: First, a language can have genuine subject pro-drop only if it allows referential null subjects without an overt antecedent, as do Italian and Spanish. Second, a language may allow only nonreferential null subjects, that is, null expletives, as in Modern Icelandic and, to some extent, German. Such languages are sometimes referred to as semi-pro-drop languages. Third, a language may allow null topics (either as subjects or as subjects and objects); it is then a topic-drop language. The general idea is that in languages without rich Agreement morphology, identification of a dropped subject or object is possible through association with an antecedent that may be just a discourse-antecedent, as in the case of Chinese.

The theory of pro-drop, whether in its standard or modified form, therefore predicts that in the absence of a rich AGR or of an antecedent, *pro* should be excluded as the subject of a finite clause.

As noted in Chapter 2, more recent minimalist attempts at accounting for pro-drop phenomena still resort to the concept of parameters (see Biberauer, 2010) but in the following analysis of Cape Verdean, we abstract away from the idea of parametric settings and invoke instead the third factor principles, as expressed in Chomsky (2005). According to Chomksy, the third factor involves language-independent principles of data processing and computational efficiency (Chomksy, 2005: 9); these principles are not exclusive to the language faculty. This

line of thinking is also illustrated in recent works by Obata, Baptista and Epstein (2013) where the timing of rule application is analyzed in terms of the third factor principles rather than in terms of parameters. In the next subsection, we introduce some of the arguments found in Sirguðsson (2012) and Frascarelli (2007) and adapt them to the Cape Verdean facts.

5.3   Sirguðsson (2011) and Frascarelli (2007) and the Cape Verdean data

Sirguðsson (2011) offers a typology of three types of language exemplified referential null subjects (2011: 268).

A.   The Romance *pro drop* type, conditioned by agreement between the subject and the verb
B.   The Germanic *topic drop* type, conditioned by an empty Spec,C but no agreement
C.   The Chinese *discourse drop* type[8], not clause internally constrained

We saw in chapter 2 examples of Romance and Chinese which are both dependent on verb agreement but it is worth lingering here on the topic drop type of language (illustrated below by Swedish) that displays a distinct behavior depending on whether or not Spec, C is empty. Consider Sirguðsson's example in (74):

(74)   Kommer tillbaks imorgon.   Swedish
        come.Ø-AGR back tomorrow   Empty Spec, C but no agreement
        '[I/We/She, etc.] will be back tomorrow.'
        (Sirguðsson, 2011: 268)

If the temporal adverb *imorgon* appears in Spec,C, then the subject must be obligatory, as shown in (75):

(75)   Imorgon   kommer   *(jag/hon/…) tillbaks. Swedish
        Tomorrow come.Ø-AGR *(I/she/…)   back
   (Sirguðsson, 2011: 268)

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[8] Note that in Huang (1984), Chinese was discussed as being topic drop rather than discourse drop.

Sirguðsson's analysis of the ungrammaticality of (75) is that null referential subjects must have access to Spec, C. The ungrammaticality of (75) results from Spec,C being filled with the temporal adverbial, hence making the pronominal subjects obligatory overt. Sirguðsson refers to this constraint as the *Empty Left Edge Condition* that stipulates that null referential subjects must be able to access Spec,C.

Sirguðsson proposes a unified minimalist analysis of referential null arguments based on a distinction between Romance types of argument drop that require ϕ-agreement and ϕ-silent types like Germanic. According to this analysis, both the overt and silent definite arguments must undergo C-edge linking. More precisely, it stipulates that any overt and silent definite argument must match at least one C/edge linker in the local C-domain; such linkers are Topic features and speech participant features such as speaker and hearer. The speaker is referred to as the logophoric agent Λ_A and the hearer as the logophoric patient Λ_P (Sirguðsson, 2011: 269). This is the C-edge Linking Generalization:

(76)   *C-edge Linking Generalization*
         Any definite argument, overt or silent, positively matches at least one CLn
         [C/edge linker] in its local C-domain, CLn $\in$ { Λ_A, Λ_P, Topic…}

The C-domain involves the representation in (77):

(77)

76
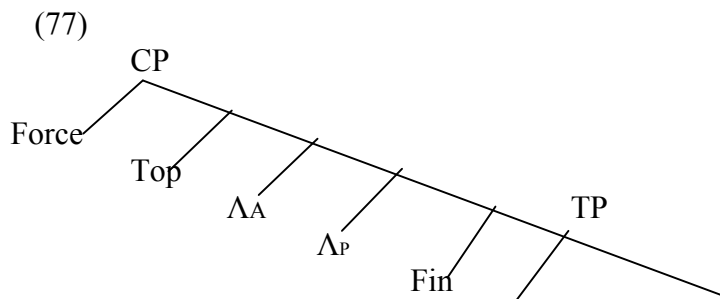
In addition to the representation in (77), Frascarelli (2007) includes among aboutness-shift topics contrastive topics and familiar topics having each of them head their own projection and resulting in the representation in (78):

(78)   […[ShiftP…[ContrP…[FamP…

The combination of the two structures in (77) and (78) allow us to account for the Cape Verdean data observed in chapter 4. The logophoric agent and patient C/edge linkers allow us to predict that null argumental first (speaker) and second (hearer) person subjects are possible in the language, as illustrated by the examples (79) and (80), repeated here from chapter 4 for convenience:

(79)   null logophoric agent
Ala ki [**N**]$_i$ *ka sa lenbra mutu bem… e nkontra un sukuru ka ta txiga…*
***pro**$_i$ ka sa persebe mutu ben, filmi staba un bokadinhu fusku, tenpu sta un bokadinhu klaru dimás.*
'It is at that point that [**I**]$_i$ no longer remember very well… he met the dark does not help… ***pro**$_i$ am not understanding very well, the movie was a bit too dark, the weather was a bit too bright.'

(80)   null logophoric patient
E bo, un sumana di trabadju, nu ta pagada dozi merés, man tanbê, kel dozi merés, [**bu**]$_i$ *pode baba Somada faze konpra. Ki **pro**$_i$ ta baba propi. **pro**$_i$ Ba faze konpra bu ben ku bu balai di konpra, purkê, tudu kuza e baratu.*
'And you, a week of work, we were paid twelve cents, but as well with those twelve cents [**you**]$_i$ could go to Assomada to do grocery shopping. That ***pro**$_i$ would go really. ***pro**$_i$ would go and do the grocery shopping you come back with your basket of groceries, because everything is cheap.'

Following Frascarelli (2007), we can assume that the C-domain contains syntactically active but silent probing logophoric features that operate as C/edge-linking features instantiating the generalization in (77) above. Furthermore, this structure allows us to explain why in example (80), the second null pronominal in a long-distance position from its antecedent and a root clause can still be C-edge linked to its antecedent.

Finally, the structure in (78) provides us with a reasonable way of accounting for the fact that an implicit aboutness topic like 'the prices' in the example (81) below can be recovered from context. Indeed, in the sentence below, the dropped argument is referring to "the prices," which is recoverable only from the context of the discourse but this is the topic the statement is about:

(81) ***pro*_i** *Ben ta subi,* ***pro*_i** *ben ta subi dos merés,* ***pro*_i** *ben subi tres,* ***pro*_i** *ben ta subi dja, ti ki* ***pro*_i** *ba aitura.*
'***pro*_i** came to rise, ***pro*_i** came to rise by two cents, ***pro*_i** came to rise by three, ***pro*_i** came to rise, until, ***pro*_i** went way high.'

5.4   Preliminary conclusions

This chapter reflects an analysis that shows the power of the C-edge linking generalization in combination with the Aboutness topic framework as providing a satisfying account of the complex set of data encountered in our examination of Cape Verdean Creole. The fact that we do not need to have recourse to the concepts of agreement, parameters or overt antecedents but rely instead on aboutness topic shifts and C-linkers make the right predictions in terms of what is possible in the language. Baptista and Bayer (in preparation) proposes to account for the full set of data attested in the corpus under study.

CHAPTER 6: CONCLUSION

I began this paper with two objectives. The first was to demonstrate that creole languages contradict the predictions and expectations of the dominant, agreement-centered pro-drop theory. I have shown that this theory is far more complex than what was originally outlined in the foundational literature, and that there are a great deal of challenges in attempting to account for the entire range of pro-drop phenomena that has been observed cross-linguistically. By examining several different proposals for defining and rethinking "richness," I showed that one such challenge to theoretical analyses centered on rich morphological inflection is the complexity of determining what the term "rich inflection" actually entails. I also discussed several contemporary analyses that add to our increasingly complex typology of null subject languages, and the ways in which these analyses have transitioned away from the parametric approach under Government and Binding. Furthermore, I discussed competing analyses for the acquisition of null subjects and what impact this may have on creoles. Despite the many diverging intricacies of this topic, the underlying focus on the correlation between inflectional morphology and null subject usage remains throughout. Thus, creole languages, given their lack of inflection, would be predicted to bar null subject usage. As I have shown, this is not the case.

I provided a survey of null subject usage in creole languages from around the world, and showed that creoles can and do instantiate a wide range of pro-drop symptoms. While many creoles show the possibility for only non-argumental null subjects, I also showed that some, such as Bislama and Cape Verdean Creole, are capable of argumental null subjects as well. I then

provided a case study of Cape Verdean using primary corpus data, which showed that CVC is actually able to instantiate a range of null argumental subjects in a variety of locations. I provided evidence for the use of four different null pronominals, in both embedded and root clauses at varying distances from their antecedents. All together, this data showed that CVC exhibits a wider range of pro-drop phenomena than even the best-studied cases of creole languages.

My second objective was then to take this data and offer an analysis that would add to the work of recent Minimalist approaches to the use of dropped arguments cross-linguistically. Based on Baptista and Bayer (in preparation), we argued that previous analyses of CVC have erroneously relied on agreement as the crucial diagnostic for pro-drop symptoms, therefore leading to contradictory conclusions about CVC's pro-drop status. Partially adopting the work of Frascarelli (2007) and Sigurðsson (2011), we account for the wide range of pro-drop phenomena that CVC exhibits by offering an analysis that abstracts away from both the concepts of agreement and parameters and relies instead either on arguments as aboutness topics and on their successful C/edge linking. Our analysis of CVC both reconciles the work of former analyses, while also accounting for the entire range of observable data. It is thus my hope that the work presented in this paper has helped to not only further our understanding of the ways in which null subjects operate in Cape Verdean, but also to broaden our perspective on the use and derivation of null subjects cross-linguistically.

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